

# FOOD AND ENTERPRISE DEVELOPMENT (FED) PROGRAM FOR LIBERIA

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Photo Caption: H.E. Ellen Sirleaf, President of Liberia, US Ambassador to Liberia, Deborah Malac and Fabio

Lavelant, CEO of Fabrar inaugurate the rice processing facility in Kakata, Margibi County.

#### **DISCLAIMER**

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

#### **Acronyms**

AEDE Agency for Economic Development and Empowerment
APDRA Association Pisciculture et Development Rural en Afrique

AVTP Accelerated Vocational Training Program

AYP Advancing Youth Project

BSTVSE Bureau of Science, Technical, Vocational and Special Education

BWI Booker Washington Institute

CARI Center of Agriculture Research Institute
CAHW Community Animal Health Worker

CBF County Based Facilitator

CILSS Permanent Interstates Committee for Drought Control in the Sahel

CoE Center of Excellence

CYNP Community Youth Network Program

DAI Development Alternatives Inc.

DCOP Deputy Chief of Party

ECOWAS Economic Community of West African States
ECREP Evangelical Children Rehabilitation Program
EMMP Environmental Mitigation and Monitoring Plan

EO Extension Officer
FtF Feed the Future

FGD Focus Group Discussion
FUN Farmer Union Network
GAP Good Agriculture Practices

GBCC Grand Bassa Community College
GCAP Green Coast Agricultural Program

GPS Global Positioning Systems

IBEX Investing in Business Expansion Liberia

IFDC International Fertilizer Developmental Center
IITA International Institute for Tropical Agriculture

IP Implementing Partner

IQC Indefinite Quantity Contract

ISFM Integrated Soil Fertility Management
KRTTI Kakata Rural Teachers Training Institute

LABEE IPG Liberia Agriculture Business Enabling Environment Inter-Agency Policy Group

LAUNCH Liberia Agriculture, Upgrading Nutrition & Child Health

LCCC Lofa County Community College

LIFE Livelihood Improvement for Farming Enterprises
LIPAS Liberia Integrated Professional Agriculture Service

LMEP Liberia Monitoring and Evaluation Program
LNGO Local Non-Governmental Organization

MFI Micro Finance Institution
MIS Market Information Systems
MoA Ministry of Agriculture

MoCl Ministry of Commerce and Industry

MoE Ministry of Education

MoHSW Ministry of Health and Social Welfare

MoP Muriate of Potash

MoU Memorandum of Understanding
MSME Micro, Small and Medium Enterprise
NDA National Diploma in Agriculture
NCCC Nimba County Community College
NIC National Investment Commission

PERSUAP Pesticide Evaluation Report and Safer Use Action Plan

PIDS Performance Indicator Database System

PMP Performance Management Plan

PUA Peri-Urban Agriculture
R&RF Rights & Rice Foundation

RFTOP Requests for Task Order Proposals

RRA Rapid Rural Appraisal

TAMIS Technical Administrative Management Information System

TSP Triple Super-Phosphate

TVET Technical, Vocational Education and Training

UDP Urea Deep Placement
UL University of Liberia

USADF United States African Development Foundation

USAID United States Agency for International Development

VET GOV Veterinary Governance in Africa

WAAPP West Africa Agriculture Productivity Program

WAFP West Africa Fertilizer Project
WASP West Africa Seed Project
WFP World Food Program

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#### **Background**

The USAID Food and Enterprise Development (FED) Program is a flagship Feed the Future (FtF) Initiative USAID-funded development program in Liberia that was launched in September 2011. USAID FED uses an all-inclusive strategy incorporating MSME farmers, processors, suppliers, women, and youth while partnering with the government of Liberia and local civil society to achieve food security.

The goal of USAID FED is to increase food availability, utilization, and accessibility by building an indigenous incentive structure that assists agricultural stakeholders in adopting commercial approaches.

This incentive structure is built upon:

- Improved technology for productivity and profitability
- Expanded and modernized input supply and extension systems
- Commercial production, marketing, and processing
- Enterprise services
- Workforce development

USAID FED works with the Ministry of Agriculture (MoA), civil society and the private sector in providing communities access to agricultural inputs, extension services, nutrition messages, processing services, market information, transportation, credit, agro-business education, training, and business development services.

In five years, USAID FED's thrust to expand market linkages is expected to lead to substantial increases in income and job opportunities. USAID FED aims to significantly boost the production, processing, marketing and nutritional utilization of rice, cassava and vegetables, and to enhance the productivity of goat farming in the counties covered by the program.

These initiatives are being carried out in Bong, Lofa, Nimba, Grand Bassa, Montserrado, and Margibi counties. USAID FED focuses on these counties because they are situated along regional development corridors that are crucial in promoting intra and inter-county commerce. These growth corridors are expected to improve food availability and access for all Liberians.

USAID FED's methodology is market-led and value chain-driven; it is committed to developing indigenous capacity building, with a specific focus on Liberia's women and youth.

USAID FED is implemented by five partners: Development Alternatives, Inc. (DAI), Winrock International, International Fertilizer Developmental Center (IFDC), Louisiana State University (LSU), and The Cadmus Group.

#### **Executive Summary**

On April 9th, 2015 the President of Liberia, H.E. Ellen Johnson Sirleaf, and United States Ambassador to Liberia, Deborah Malac, were in Kakata, Margibi County to officially inaugurate Liberia's first industrial rice processing and warehousing facility, Fabrar Liberia Inc. Fabrar Liberia Inc. (Fabrar) is a fully incorporated, Liberian owned and run agriculture holding firm created in 2009. In 2014, with financial and technical support from the U.S. Government through the USAID Food and Enterprise Development (USAID FED) program and private equity financing from West Africa Venture Fund, Fabrar was able to procure an automated rice processing mill and expand its warehouse facilities. The industrial scale facility, now with double its previous capacity, can mill 30 metric tons (MT) of rice each day and store I,000-MT with proper ventilation and protection from pests, mold, fungus and mildew. As the



Figure 1: H.E. Ellen Sirleaf, President of Liberia, US Ambassador to Liberia, Deborah Malac and Fabio Lavelant, CEO of Fabrar inaugurate the rice processing facility in Kakata, Margibi County.

country's largest rice processor, and currently, the only industrial processor, Fabrar Liberia Inc. will provide Liberian farmers with an incentive and motivation to grow quality rice as a business and not just for subsistence.

During April, 3,482MT of cassava tubers from FY13 FED beneficiaries were sold for USD \$186,529.10. A total of 8,995.83MT of cassava has been harvested of which 7,717MT has been sold for USD \$606,823.62 year to date. Also, during April, a total of 13 micro-processors procured 149.76MT of cassava tubers valued at USD \$17,960.50 from FY13 and FY14 USAID FED supported cassava farmers. The micro-processors further sold 185.84MT of processed cassava at a cumulative value of USD \$70,826.25 during the same period.

In April, from the FY14 and FY15 goat production sites, a total of 486 goats were sold for USD \$32,055.00. In total, 3,862 goats from the FY14 and FY15 production intensification sites have been sold for USD \$206,449.78 year to date.

In April Zeelie Farmers Association purchased and sold 3,000 50kg bags to MoA with a sales value of USD \$60,000. 60% of the rice was purchased from USAID FED supported farmers while 40% was purchased from non-USAID FED farmers in Lofa. USAID FED will continue to support Zeelie Farmers Association with technical assistance to further procure additional paddy rice for the local market.

In April, the multi-purpose science laboratory renovation works commenced at the four Centers of Excellence Institutions (CoE). During the month, the firms commenced the construction of the water towers and generator rooms. The CoE's Administration is working closely with the construction firms and Global Construction Mechanical Company (GCMC) supervisors to ensure that work is progressing according to the plan. Once completed these science labs will be able to generate revenue for the CoEs through services such as soils and seed testing.

# Component One: Increase Agricultural Productivity and Profitability Task IA: Increased Productivity and Profitability of the Rice Value Chain

#### Rice Sales from FY14:

During April, a total of 225.75MT of FY14 rice crop was sold at a value of USD \$150,442. A cumulative total of 2,691.54MT of FY14 rice crops have been sold at a value of USD \$1,204,063.53 year to date (Table 1).

Table 1: FY14 Rice crop sales

| County      | Sales<br>Volume<br>QI<br>2015<br>(MT) | Sales value<br>QI<br>2015<br>(USD\$) | Sales<br>Volume<br>Q2 2015<br>(MT) | Sales value<br>Q2<br>2015<br>(USD\$) | Sales<br>volume<br>April 2015<br>(MT) | Sales value<br>April<br>2015<br>(US\$) | Sales<br>Volume<br>YTD<br>(MT) | Sales value<br>YTD<br>(USD\$) |
|-------------|---------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|----------------------------------------|--------------------------------|-------------------------------|
| Lofa        | 122.09                                | \$47,983.31                          | 1703.00                            | \$681,652.00                         | 20.00                                 | \$7,700.00                             | 1845.09                        | \$737,335.31                  |
| Nimba       | 0.00                                  | \$0.00                               | 35.50                              | \$17,216.32                          | 0.00                                  | \$0.00                                 | 35.50                          | \$17,216.32                   |
| Bong        | 96.30                                 | \$38,979.40                          | 476.73                             | \$255,632.50                         | 199.25                                | \$140,402.00                           | 772.28                         | \$435,013.90                  |
| Grand Bassa | 17.70                                 | \$7,080.00                           | 14.47                              | \$5,078.00                           | 6.50                                  | \$2,340.00                             | 38.67                          | \$14,498.00                   |
| TOTAL       | 236.09                                | \$94,042.71                          | 2229.70                            | \$959,578.82                         | 225.75                                | \$150,442.00                           | 2691.54                        | \$1,204,063.53                |

#### Rice crop harvests from FY14:

By the end of quarter two, all 2,464.82 Ha of upland areas planted during FY14 period had been completely harvested yielding 5,041.55MT of rice. This translated into an average of 2.04MT per hectare planted. Similarly, all 1,091.51 Ha of lowland areas planted during the FY14 period had been completely harvested yielding 4,138.68MT of paddy rice. This translated to 3.79MT of rice per hectare planted. In total, 9,180.23MT of rice was harvested from a total 3,556.33 ha planted in FY14 excluding the amounts of rice that was consumed at the household level or given away by beneficiaries to friends and relatives. In FY15, a survey will be conducted to determine the quantities of rice consumed at the household level or given away to others.

#### Activity I.A.I Improving productivity and profitability of upland rice

#### Task I.A.I.I Identify and recruit II,025 new upland farmers to produce upland rice:

By the end of April, the 11, 296 upland rice farmers (6,787 male and 4,509 female) had cleared a total of 2,949.5 ha in preparation for FY15 upland rice production (Table 2).

Table 2: Upland commercial sites cleared for planting.

| County | FYI5<br>Upland<br>Farmer<br>Target | Number<br>of<br>Farmers<br>verified<br>by end of<br>Q2 FY15 | Number<br>of FY15<br>targeted<br>sites | Number<br>of sites<br>identified<br>by Q2 | Targeted<br>hectares for<br>FY15<br>production | Number<br>of<br>Hectares<br>cleared as<br>of Q2 | Number<br>of<br>Hectares<br>cleared in<br>April | Total<br>number of<br>Hectares<br>cleared<br>YTD |
|--------|------------------------------------|-------------------------------------------------------------|----------------------------------------|-------------------------------------------|------------------------------------------------|-------------------------------------------------|-------------------------------------------------|--------------------------------------------------|
| Lofa   | 1,750                              | 1,912                                                       | 61                                     | 61                                        | 420.00                                         | 442.00                                          | 0.00                                            | 442.00                                           |
| Nimba  | 4,550                              | 4,550                                                       | 110                                    | 110                                       | 182.00                                         | 182.00                                          | 0.00                                            | 182.00                                           |
| Bong   | 4,060                              | 4,064                                                       | 109                                    | 109                                       | 2,030.00                                       | 2,040.00                                        | 10.00                                           | 2,050.00                                         |

| Grand Bassa | 665    | 770    | 17  | 17  | 332.50   | 97.00    | 178.50 | 275.50   |
|-------------|--------|--------|-----|-----|----------|----------|--------|----------|
| TOTAL       | 11,025 | 11,296 | 297 | 297 | 2,964.50 | 2,761.00 | 188.50 | 2,949.50 |

#### Task I.A.I.2 Recruit local NGOs to provide implementation support to upland rice farmers:

By the end of April, the five LNGOs hired a total of 82 staff across the counties. During April, the LNGO's provided technical assistance to the lowland and upland rice farming groups across the counties towards establishing demonstration sites.

#### Task I.A. I.3 Establish 297 hectares of new demonstration sites:

By the end of March, 242.5 Ha of new upland demonstration sites was cleared. This means all the demonstration sites have been cleared across the four counties (Table 3). The counties have commenced land preparation (collection and disposal of debris from burn materials)

Table 3: Upland demonstrations sites establishment.

| County | FY15<br>Demo<br>sites<br>target | FY15 Demo<br>Ha target | Number of<br>Ha cleared<br>by end of Q2 | Number of Ha<br>cleared in<br>April | Total<br>number of<br>Ha cleared<br>YTD |
|--------|---------------------------------|------------------------|-----------------------------------------|-------------------------------------|-----------------------------------------|
| Bong   | 109.00                          | 54.5                   | 54.50                                   | 0.00                                | 54.50                                   |
| Lofa   | 61.00                           | 61.00                  | 61.00                                   | 0.00                                | 61.00                                   |
| Nimba  | 110.00                          | 110.00                 | 110.00                                  | 0.00                                | 110.00                                  |
| Bassa  | 17.00                           | 17.00                  | 17.00                                   | 0.00                                | 17.00                                   |
| Total  | 297.00                          | 222.5                  | 242.50                                  | 0.00                                | 242.50                                  |

#### Task I.A. I.6 Procure and distribute 17.82 MT of Nerica -14 seed to 297 ha of demonstration sites:

In March, USAID FED held meetings with the Ministry of Agriculture (MoA) and the West Africa Agricultural Productivity Program (WAAPP) to discuss how USAID FED beneficiaries could benefit from certified upland rice seed that the World Bank was financing for distribution to farmers in Liberia. USAID FED provided WAAPP with a comprehensive listing of FY13, FY14 and FY15 farmer beneficiaries for consideration. After receiving a positive response from WAAPP and MoA, the procurement of upland rice seed was put on hold. In April, USAID FED commenced the procurement of upland rice seed for its farmers for distribution before the end of May.

#### Task I.A.I.7 Procure and distribute 60MT of fertilizer to 297 ha of demonstration sites:

By the end of April, Gro Green, the vendor contracted to supply fertilizer to USAID FED confirmed the arrival of the fertilizer in Liberia. All the fertilizer will be distributed to beneficiaries before the end of May.

#### Task 1.A.1.8 Procure and distribute 4,752 Liters of herbicides to 297 ha of demonstration sites:

By the end of April, USAID FED commenced the procurement process of herbicides to be used for weed control in the field. The herbicides will be distributed to the farming groups.

#### Activity I.A.2 Expanding lowland rice production

#### Task I.A.2.1 Identify and recruit 7,175 new lowland farmers to produce lowland rice during FY15:

During April, the 11,154 selected farmers (6062 male and 5092 female) had cleared a total of 466.3 Ha of lowlands towards FY15 lowland rice production. In total, 1,995.56 Ha of lowlands had been cleared against a 3,545.90 Ha target (Table 4).

Table 4: Lowland commercial sites cleared for planting.

| County      | Targeted hectares for FY15 | New targeted hectares for FY15 | Hectares cleared in Q2 | Hectares cleared in | Hectares cleared YTD |
|-------------|----------------------------|--------------------------------|------------------------|---------------------|----------------------|
|             |                            |                                | FY15                   | April               |                      |
| Bong        | 700.00                     | 1,654.50                       | 1,265.00               | 150                 | 1415                 |
| Lofa        | 350.00                     | 969.90                         | 197.90                 | 70                  | 267                  |
| Nimba       | 812.00                     | 835.50                         | 60.96                  | 215                 | 275.96               |
| Grand Bassa | 46.20                      | 86.00                          | 6.30                   | 31.3                | 37.6                 |
| TOTAL       | 1,908.20                   | 3,545.90                       | 1,530.16               | 466.3               | 1,995.56             |

# Task 1.A.2.3 Establish 191 hectares of new demonstration sites:

In April, 53.2 Ha of new demonstration sites were cleared. In total, 304 Ha of new demonstration sites has been cleared across the four counties by the end of April (Table 5).



Figure 2: Land clearing and field layout in panta cluster, Bong County.

Table 5: Lowland demonstrations sites establishment

| County | demonstration<br>sites target<br>(Ha) | Number<br>of Ha<br>cleared by<br>Q2 | Number<br>of Ha<br>cleared in<br>April | Total number<br>of Ha cleared<br>YTD |
|--------|---------------------------------------|-------------------------------------|----------------------------------------|--------------------------------------|
| Bong   | 79                                    | 79                                  | 0                                      | 79                                   |
| Lofa   | 50                                    | 37                                  | 13                                     | 50                                   |
| Nimba  | 111                                   | 60.96                               | 50.04                                  | 111                                  |
| Bassa  | 27                                    | 24.2                                | 2.8                                    | 27                                   |
| Total  | 267                                   | 201.16                              | 65.84                                  | 267                                  |

#### Task 1.A.2.4 Train 191 lead farmers on lowland rice production practices:

From April 7 -10, USAID FED facilitated a training session on lowland and upland rice production practices for 27 lead farmers (25 male and 2 female) in Buchanan city, Grand Bassa County. The lead farmers were trained on production planning and pest and diseases management in lowland rice production (Table 6). In total, 267 lead farmers (237 male and 30 female) have been trained on lowland rice production year to date.

Table 6: Lowland rice lead farmers trained in April.

| County      | Number of lead farmer trained in March | Number<br>of lead<br>farmer<br>trained in<br>April | Number<br>of Lead<br>farmers<br>trained<br>YTD | Male | Female |
|-------------|----------------------------------------|----------------------------------------------------|------------------------------------------------|------|--------|
| Bong        | 79                                     | 0                                                  | 79                                             | 71   | 8      |
| Lofa        | 50                                     | 0                                                  | 50                                             | 47   | 3      |
| Nimba       | 111                                    | 0                                                  | 111                                            | 94   | 17     |
| Grand Bassa | 0                                      | 27                                                 | 27                                             | 25   | 2      |
| Total       | 240                                    | 27                                                 | 267                                            | 237  | 30     |

# Task I.A.2.6 Procure and distribute 7.64 MT of Nerica-L19 seeds to 267 ha of new demo-sites:

During April, USAID FED commenced the distribution of Nerica L-19 seeds to lowland rice farmer groups. All lowland seed distribution will be completed before the end of May.



Figure 3: Participants at the training held in Buchanan, Grand Bassa County.

Table 7: Lowland seed distribution table.

| County      | Ecology | Variety    | Targeted<br>inputs<br>(MT) | Qty<br>distributed<br>in April<br>(MT) | Qty<br>distributed<br>YTD |
|-------------|---------|------------|----------------------------|----------------------------------------|---------------------------|
| Bong        | Lowland | Nerica L19 | 13.79                      | 13.79                                  | 13.79                     |
| Nimba       | Lowland | Nerica L19 | 6.95                       | 0.00                                   | 0.00                      |
| Lofa        | Lowland | Nerica L19 | 6.97                       | 0.00                                   | 0.00                      |
| Grand Bassa | Lowland | Nerica L19 | 0.86                       | 0.00                                   | 0.00                      |
| TOTALS      |         |            | 28.57                      | 13.79                                  | 13.79                     |

# Task 1.A.2.7 Procure and distribute 59.4MT of TSP, MOP, and Urea Briquette & Urea fertilizer to 267 demonstration sites:

By the end of April, the contracted vendor Gro Green confirmed to USAID FED that fertilizers had arrived at the port in Monrovia. Distribution of fertilizer will be conducted in May once the vendor delivers the 191.559MT consignment to USAID FED.

#### Task 1.A.2.8 Procure and distribute 3,065 litres of herbicides to 191 demonstration sites:

By the end of April, USAID FED commenced the procurement process of herbicides to be used for weed control in the field. The herbicides will be distributed to the farming groups.

#### Task 1.A.2.9 Procure and distribute 382 liters of pesticides to 191 demonstration sites plots for trials:

By the end of April, USAID FED commenced the procurement process of pesticides to be used for insect pest and disease control in the field. The pesticides will be distributed to the farming groups before the end of June.

#### Activity I.A.3 Enhancing mechanization for lowland rice production

#### Task 1.A.3.2 Identify entrepreneurs and distribute 30 power tillers through cost-share arrangements:

During April, the contracted vendor for the supply of power tillers to USAID FED confirmed the arrival of the power-tillers in Monrovia. These power tillers will be distributed to the identified youth entrepreneurs before the end of May.

# Task 1.A.3.4 Sub contract power saw operators to assist with de-stumping and clearing of new lowlands:

During April, 20 power saw operators were contracted by USAID FED to support land clearing across the four counties. Each power saw operator is assigned to a district cluster. Each cluster has a minimum of 100 ha. The land clearing in a district cluster is expected to be completed within six weeks.

#### Task I.A.3.5 Procure 8 paddy drum seeders for demonstration trials in the 4 counties:

During April, the contracted vendor for the supply of paddy drum seeders to USAID FED confirmed the arrival of eight paddy drum seeders in Monrovia. An additional 12 paddy drum seeders will be imported. These paddy drum seeders will be distributed to the rice business hubs by June.

#### Task I.A.3.6 Procure and distribute 8 cono-weeders for demonstration trials in 4 the counties:

During April, the contracted vendor for the supply of to USAID FED confirmed the arrival of 20 conoweeders in Monrovia. These cono-weeders will be distributed to the rice business hubs by the end of May. A cono-weeder is a hand operated implement with a roller on front with spikes for weeding. It makes weeding easier and less time-consuming.

#### Activity I.A.4 Promoting use of fertilizers in upland and lowland rice production

# Task 1.A.4.2 Distribute Leaf Color Charts to determine Nitrogen requirements to 424 upland and 696 lowland demonstration sites:

By the end of April, the leaf color charts procured through DAI Home Office arrived in Liberia. The clearance process with customs is currently ongoing. USAID FED is conducting training of lead farmers, extension staff and LNGOs on the use of the leaf color chat on an ongoing basis.

#### Activity I.A.6 Promoting 2 rice crops per years

#### Task I.A.6.2 Construct 30 new irrigation spillways and head dykes:

By the end of April, Tallobenku Construction, the construction firm contracted to oversee construction of irrigation spillways commenced work in Lofa County. It is anticipated that spillway construction in all 30 sites will be completed by the end of July.

Of the 12 sites constructed in FY14, nine sites commenced double cropping in March. In April, an additional 4.5 ha was double cropped at the same sites. In total, 15 ha out the 50 ha supported by the spillways are currently under double cropping (Table 8). USAID FED learned that the farmers are reluctant to carry out second cropping for various reasons among which is the question of feasibility of a second crop. USAID FED

is currently creating more awareness on the advantages of double cropping with the farmer groups to invest in a second crop.

Table 8: Sites promoting two rice crops per year.

| County | Name of Group               | Name of Community                          | Ha under second<br>crop production<br>as of Q2, 2015 | Ha under<br>second crop<br>production as in<br>April, 2015 | Ha under<br>second crop<br>production<br>YTD |
|--------|-----------------------------|--------------------------------------------|------------------------------------------------------|------------------------------------------------------------|----------------------------------------------|
| Lofa   | Kahenjala                   | Kolahun                                    | 2.00                                                 | 0.00                                                       | 2.00                                         |
|        | Kugbemai                    | Voinjama                                   | 2.00                                                 | 0.00                                                       | 2.00                                         |
|        | Rice and Food Crop          | Foya                                       | 1.00                                                 | 0.00                                                       | 1.00                                         |
|        | Sadu Passia                 | Foya                                       | 0.50                                                 | 0.00                                                       | 0.50                                         |
| Bong   | Welekermah                  | Doetain-Ta, Panta district                 | 3.00                                                 | 0.00                                                       | 3.00                                         |
|        | Yalakponmah                 | Garmue-2, Panta District                   | 0.50                                                 | 0.00                                                       | 0.50                                         |
|        | Kukatono                    | Gbarngasiaquelleh                          | 0.50                                                 | 0.00                                                       | 0.50                                         |
| Nimba  | Karmei Farm Zoelay Memorial | Dekamon Town,<br>Sanniquelleh Mah District | 0.50                                                 | 3.50                                                       | 4.00                                         |
|        | Guasi Farm                  | Guasi Farm, Sanniquelleh<br>Mah District   | 0.50                                                 | 1.00                                                       | 1.50                                         |
| Total  |                             |                                            | 10.50                                                | 4.50                                                       | 15.00                                        |

#### Activity I.A.7 Enhancing post-harvest management practices

#### FY14 Rice business Hubs

During April, three rice business hubs processed and sold 48MT of 50 kg bags of rice at a value of USD \$35,520.00 to the World Food Program and community markets. The rice business hubs in Lofa have a current inventory of LIMT of rice valued at USD \$7,700 (Table 9).

Table 9: RBHs inventory and sales.

| County | RBH location     | Inventory<br>(MT) | Inventory value<br>(US\$) | Sales Volume<br>in April (MT) | Sales Value<br>in April<br>(US\$) | Sales Value<br>YTD (US\$) |
|--------|------------------|-------------------|---------------------------|-------------------------------|-----------------------------------|---------------------------|
| Lofa   | Serkonnedu       | 6                 | \$4,200.00                | 40.00                         | \$28,800                          | \$48,000                  |
|        | David Selma Town | 2                 | \$1,400.00                | 5.00                          | \$3,600                           | \$3,600                   |
|        | Foya town        | 3                 | \$2,100.00                | 3.00                          | \$2,160                           | \$2,160                   |
| Total  |                  | П                 | \$7,700.00                | 48.00                         | \$35,520                          | \$35,520                  |

#### Task I.A.7.1 Identify 10 new community rice business hubs sites:

A total of 15 potential sites for the establishment of the new rice business hubs have been identified. These sites will be verified during the month of May, and the beneficiary organizations will be assessed on their commitment and willingness to cost-share. The final sites will be selected in May.

#### Task I.A.7.2 Construct and equip identified community rice business hubs:

By the end of April, USAID FED has identified ten rice business hub sites across the counties (Bong-4, Lofa-3 and Nimba-4). These sites are now been verified by the county team. As part of establishing the ten rice business hubs, USAID FED received the final copy of the architectural drawing from Innovative Architectural Firm, the A&E firm contracted to provide both architectural and supervision support to the construction of the ten new rice business hubs. The construction of the new rice business hubs is expected to commence by June and be completed by the end of September.

# Activity I.A.8 Stimulating private sector investment in commercial rice production

# Task I.A.8.5 Facilitate linkages between FABRAR, Government Agencies and Institutional buyers:

On April 9, Fabrar Liberia Inc.'s rice processing facility was officially inaugurated by her Excellency Madam Ellen Johnson Sirleaf, the President of the Republic of Liberia. The occasion was also graced by her Excellency Honorable Deborah Malac, the US ambassador to Liberia, high level USAID Liberia officials and well as Government officials from the Ministry of Agriculture (MoA), Ministry of Commerce & Industries (MoCI) and representatives of the legislature.

During the ceremony, President Sirleaf expressed her gratitude to USAID FED for supporting Fabrar Liberia Inc. in creating market access for Liberian farmers and adding value to the local rice. Other speakers at the occasion included the US Ambassador, Dr. Anthony Oboh, of the West Africa Venture Fund, Senator Oscar Cooper of Margibi County and USAID FED's Chief of Party Ms. Agnes Luz.

#### Task 1.A.8.7 Recruitment of Rice Technical Specialist:

During April, USAID FED's Rice Technical Specialist conducted an assessment of eight spillway sites established in Bong and Nimba counties in FY14 to assess challenges associated with realizing double cropping and to provide recommendations on



Figure 4: Fabio Lavalanet giving a tour of the Fabrar Liberia Inc. rice processing facility to the President of Liberia Ellen Johnson and the US Ambassador Deborah Malac.



Figure 5: Double cropping sites transplanted field in Gusi farm, Nimba.

how these sites could be fully optimized. The specialist also assisted the Extension Unit to prepare the rice curriculum and presented the same to stakeholders during the Rice validation workshop held at FED offices on April 22.

Additionally, the specialist, USAID FED's Lofa County Manager and Irrigation Specialist participated in a workshop on the development of integrated lowland rice organized by MoA and Swiss Development Cooperation in Lofa County from April 8-10, 2015. The workshop covered seven key area to include transitioning farming systems from upland to the lowland, policies to support lowland rice production, development of water management structures, reducing post-harvest losses in rice based integrated cropping systems, effective information and communication amongst stakeholders, institutional capacity development and sector coordination.

#### Task IB: Increased Production and Profitability of Cassava Value Chain

#### FY13 cassava crop harvests and sales:

During April, a total of 3,582MT of cassava tubers were harvested from 199 Ha of FY13 demo and farmers' fields. The reported total quantity of cassava harvested by FY13 beneficiary farmers comes to 8,995.83MT from 481.50 Ha of land planted (Table 10).

Table 10: FY13 Cassava crop harvest – demo sites and farmer fields.

| County      | Hectares<br>planted<br>for FY13<br>crop | Expected<br>Harvest<br>FYI3<br>Crop<br>(MT) | Hectares<br>harvested<br>in QI of<br>FYI5 | Volume<br>harvested<br>in Q1 of<br>FY15<br>(MT) | Hectares<br>harvested<br>in Q2 of<br>FY15 | Volume<br>harvested<br>in Q2 of<br>FY15<br>(MT) | Hectares<br>harvested<br>in April | Volume<br>harvested<br>in April<br>(MT) | Total FYI3 area harvested YTD (Ha) | Total FYI3<br>crop<br>harvested<br>YTD<br>(MT) |
|-------------|-----------------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------------|-------------------------------------------|-------------------------------------------------|-----------------------------------|-----------------------------------------|------------------------------------|------------------------------------------------|
| Bong        | 32.70                                   | 719.4                                       | 2.70                                      | 60.75                                           | 31.8                                      | 735.48                                          | 0.00                              | 0.00                                    | 34.50                              | 796.23                                         |
| Nimba       | 283.66                                  | 6,240.52                                    | 105.66                                    | 1,944.60                                        | 40.41                                     | 714.28                                          | 25.00                             | 450.00                                  | 171.07                             | 3,108.88                                       |
| Lofa        | 22.90                                   | 503.8                                       | 1.10                                      | 36.81                                           | 22.5                                      | 492.93                                          | 0.00                              | 0.00                                    | 23.60                              | 529.74                                         |
| Grand Bassa | 697.20                                  | 12,818.4                                    | 30.39                                     | 526.48                                          | 47.94                                     | 902.5                                           | 174.00                            | 3,132.00                                | 252.33                             | 4,560.98                                       |
| TOTAL       | 1,036.46                                | 20,282.12                                   | 139.85                                    | 2,568.64                                        | 142.65                                    | 2,845.19                                        | 199.00                            | 3,582.00                                | 481.50                             | 8,995.83                                       |

During April, 3,482MT of FY13 cassava tubers were sold for USD \$186,529.10. A total of 8,995.83MT of cassava has been harvested of which 7,717MT has been sold for USD \$606,823.62 year to date (Table 11). It is estimated that most of the harvest has been consumed as what typically happens, but cannot be accounted for because farmers harvest in a staggered manner.

Table 11: FY13 Cassava crop sales.

| County      | Volume<br>sold in QI<br>(MT) | Value of<br>Sales in QI<br>(US\$) | Volume<br>sold in<br>Q2<br>(MT) | Value of<br>Sales in Q2<br>(USD\$) | Volume<br>sold in<br>April<br>(MT) | Value of<br>Sales in<br>April<br>(USD\$) | Volume<br>sold<br>YTD<br>(MT) | Value of<br>sales YTD<br>(USD\$) |
|-------------|------------------------------|-----------------------------------|---------------------------------|------------------------------------|------------------------------------|------------------------------------------|-------------------------------|----------------------------------|
| Bong        | 60.8                         | \$4,433.30                        | 579.48                          | \$37,383.00                        | 0                                  | \$0.00                                   | 640.28                        | \$41,816.30                      |
| Nimba       | 1,927.40                     | \$247,653.27                      | 553.26                          | \$71,399.60                        | 350                                | \$38,607.10                              | 2,830.66                      | \$357,659.97                     |
| Lofa        | 37.37                        | \$2,502.47                        | 13                              | \$955.88                           | 0                                  | \$0.00                                   | 50.37                         | \$3,458.35                       |
| Grand Bassa | 526.6                        | \$35,204.00                       | 537.3                           | \$20,763.00                        | 3,132.00                           | \$147,922.00                             | 4,195.90                      | \$203,889.00                     |
| TOTAL       | 2,552.17                     | \$289,793.04                      | 1,683.04                        | \$130,501.48                       | 3,482.00                           | \$186,529.10                             | 7,717.21                      | \$606,823.62                     |

#### FY14 cassava crop harvests and sales:

During April, a total of 4,192MT of cassava tubers were harvested from 233 Ha of FY14 demo and farmers' fields. The reported total quantity of FY14 cassava crop harvested comes to 5,463MT from 300 Ha of land planted (Table 12).

Table 12: FY14 Cassava crop harvests – demo sites and farmer fields.

| County | Area    | Expected  | Area      | Volume    | Area      | Volume    | Area      | Volume    | Total     | Total     |
|--------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|        | planted | Harvest   | harvested | harvested | harvested | harvested | harvested | harvested | FY14 area | FY14      |
|        | for     | FY14 Crop | in QI of  | in QI of  | in Q2 of  | in Q2 of  | in April  | in April  | harvested | crop      |
|        | FY14    | (MT)      | FY15      | FY15      | FY15      | FY15      | (Ha)      | (MT)      | YTD       | harvested |
|        | crop    | , ,       | (Ha)      | (MT)      | (Ha)      | (MT)      | , ,       | ` '       | (Ha)      | YTD       |
|        |         |           | ` '       | ` ′       | ` '       | ` '       |           |           | ` ´       |           |

|             | (Ha)     |           |      |      |       |          |        |          |        | (MT)     |
|-------------|----------|-----------|------|------|-------|----------|--------|----------|--------|----------|
|             |          |           |      |      |       |          |        |          |        |          |
|             |          |           |      |      |       |          |        |          |        |          |
|             |          |           |      |      |       |          |        |          |        |          |
| Bong        | 480.00   | 8,640.00  | 0.00 | 0.00 | 2.5   | 55.70    | 14.24  | 256.32   | 16.74  | 312.02   |
| N. 1        | 040.00   | 1700000   | 0.00 | 2.22 | 0.00  | 0.00     | 45.00  | 01000    | 45.00  | 010.00   |
| Nimba       | 960.00   | 17,280.00 | 0.00 | 0.00 | 0.00  | 0.00     | 45.00  | 810.00   | 45.00  | 810.00   |
| Lofa        | 240.00   | 4,320.00  | 0.00 | 0.00 | 0.00  | 0.00     | 5.70   | 101.60   | 5.70   | 101.60   |
| Loia        | 2 10.00  | 1,320.00  | 0.00 | 0.00 | 0.00  | 0.00     | 3.70   | 101.00   | 3.70   | 101.00   |
| Grand Bassa | 720.00   | 12,960.00 | 0.00 | 0.00 | 64.90 | 1,215.10 | 168.00 | 3,024.00 | 232.90 | 4,239.10 |
|             |          | ŕ         |      |      |       | ·        |        | ,        |        |          |
|             |          |           |      |      |       |          |        |          |        |          |
| TOTAL       | 2,400.00 | 43,200.00 | 0.00 | 0.00 | 67.40 | 1,270.80 | 232.94 | 4,191.92 | 300.34 | 5,462.72 |

During April, 3,976.92MT of FY14 cassava tuber was sold for USD \$239,402.02. A total of 5,463.72MT of cassava has been harvested of which 5,192.02MT has been sold for USD \$287,050.72 year to date (Table 13).

Table 13: FY14 Cassava crop sales.

| County      | Volume<br>sold in<br>QI (MT) | Value of<br>Sales in QI<br>(USD\$) | Volume<br>sold in Q2<br>(MT) | Value of<br>Sales in Q2<br>(USD\$) | Volume sold<br>in April (MT) | Value of<br>Sales in April<br>(USD\$) | Volume sold<br>YTD (MT) | Value of sales<br>YTD (USD\$) |
|-------------|------------------------------|------------------------------------|------------------------------|------------------------------------|------------------------------|---------------------------------------|-------------------------|-------------------------------|
| Bong        | 0.00                         | \$0.00                             | 0.00                         | \$0.00                             | 256.32                       | \$16,467.00                           | 256.32                  | \$16,467.00                   |
| Nimba       | 0.00                         | \$0.00                             | 0.00                         | \$0.00                             | 595.00                       | \$70,087.50                           | 595.00                  | \$70,087.50                   |
| Lofa        | 0.00                         | \$0.00                             | 0.00                         | \$0.00                             | 101.60                       | \$7,559.52                            | 101.60                  | \$7,559.52                    |
| Grand Bassa | 0.00                         | \$0.00                             | 1,215.10                     | \$47,648.70                        | 3,024.00                     | \$145,288.00                          | 4,239.10                | \$192,936.70                  |
| TOTAL       | 0.00                         | \$0.00                             | 1,215.10                     | \$47,648.70                        | 3,976.92                     | \$239,402.02                          | 5,192.02                | \$287,050.72                  |

#### Sales generated by cassava microprocessors:

During April, a total of 13 micro-processors procured 149.76MT of cassava tuber valued at USD \$17,960.50 from FY13 and FY14 USD FED supported cassava farmers. The micro-processors further sold 185.84MT of processed cassava at a cumulative value of USD \$70,826.25 during the same period (Table 14).

Table 14: Cassava tuber purchases and processed by micro-processors.

| County         | Volume of tubers<br>procured by<br>micro-processors<br>in April<br>(MT) | Value of tubers<br>procured by<br>micro-processors<br>in April<br>(USD\$) | Volume of processed cassava sold by micro-processors in April (MT) | Value of processed<br>cassava sold by<br>micro-processors<br>in April<br>(USD\$) |
|----------------|-------------------------------------------------------------------------|---------------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Bong           | 149.76                                                                  | \$17,960.50                                                               | 97.84                                                              | \$2,606.25                                                                       |
| Nimba          | 0.00                                                                    | \$0.00                                                                    | 0.00                                                               | \$0.00                                                                           |
| Lofa           | 0.00                                                                    | \$0.00                                                                    | 0.00                                                               | \$0.00                                                                           |
| Grand<br>Bassa | 0.00                                                                    | \$0.00                                                                    | 88.00                                                              | \$68,220.00                                                                      |
| Total          | 149.76                                                                  | \$17,960.50                                                               | 185.84                                                             | \$70,826.25                                                                      |

#### Sales generated by commercial cassava cuttings nurseries:

During April, four cassava nurseries produced 45,600 bundles of cassava cuttings (Each bundle has an average of 50 cuttings). Four nurseries sold 1,350 bundles of cuttings to USAID FED supported farmers and generated USD \$6,750 in revenues (Table 15).

Table 15: Sales by commercial cassava cuttings nurseries.

| County      | # of<br>Nurseries | # of cuttings<br>produced in April | # of cuttings sold in<br>April (Bundles) | Value of<br>cuttings sold<br>(USD\$) |
|-------------|-------------------|------------------------------------|------------------------------------------|--------------------------------------|
| Bong        | 2                 | 45,000                             | 750                                      | \$3,750.00                           |
| Nimba       | 0                 | 0                                  | 0                                        | \$0.00                               |
| Lofa        | 0                 | 0                                  | 0                                        | \$0.00                               |
| Grand Bassa | 2                 | 600                                | 600                                      | \$3,000.00                           |
| Total       | 4                 | 45,600                             | 1,350                                    | \$6,750.00                           |

#### Activity I.B.I Facilitating access to high yielding cassava varieties:

#### Task I.B. I. I Screening of cassava cuttings on 2 sites in Lofa through collaboration with CARI

During April, USAID FED continued to manage and maintain the two cassava screening sites in Lofa County in close collaboration with CARI. Out of the 11 varieties screened, CARI has earmarked ten varieties for official release in May (Table 16). One variety, IITA-TMS-IBA01/30572 has not been shortlisted after the screening due to cassava mosaic virus spotted on the variety planted at the CARI screening site. The same variety at the USAID FED site in Lofa has not shown the disease.

Table 16: Shortlist of imported improved varieties for release.

| IITA-TMS-IBA98/0581 |
|---------------------|
| IITA-TMS-IBATME419  |
| IIAT-TMS-IBA95/0289 |
| ITA-TME-IBA01/0040  |
| IITA-TMS-IBA01/1371 |
| IITA-TMS-IBA01/1412 |
| IITA-TMS-IBA92/0057 |
| IITA-TMS-IBA01/1368 |
| IITA-TMS-IBA96/1632 |
| IITA-TMS-98/0505    |

Task 1.B.1.3 Suitable varieties released for multiplication:

From April 28 - May I, USAID FED and CARI facilitated training for 40 commercial nursery owners, six USAID FED extension officers, four Independent Consultants for the IITA screening site and five LNGO staff on rapid multiplication of cassava cuttings through efficient production and handling of cuttings (Table 17). The training was held at CARI in Suakoko, Bong County.

Table 17: Rapid multiplication training participants list

| County               | Total No. of<br>Participants | Male | Female |
|----------------------|------------------------------|------|--------|
| Bong Nursery Owners  | 8                            | 7    | I      |
| Nimba Nursery Owners | 16                           | 13   | 3      |
| Lofa Nursery Owners  | 4                            | 3    | I      |

| Grand Bassa Nursery Owners | 12 | 12 | 0 |
|----------------------------|----|----|---|
| IITA Staff                 | 4  | 3  | I |
| LNGO Extension Officers    | 5  | 5  | 0 |
| USAID FED Staff            | 6  | 6  | 0 |
| TOTAL                      | 55 | 49 | 6 |

#### Activity I.B.2 Enhancing availability of improved varieties for multiplication

#### Task I.B.2.3 Distribution of improved cuttings to commercial nurseries:

During the quarter two reporting period, a distribution plan was developed to facilitate the timely transfer of improved cuttings to cassava nurseries owners for multiplication. It is anticipated that once CARI releases the imported improved varieties, a new distribution plan will be developed on the basis of released varieties and distribution will commence in June.

#### Activity I.B.3 Enhancing knowledge on improved varieties and technologies

# Task 1.B.3.2 Mobilize 12,960 new famers in 648 Kuus towards FY15 cassava production:

During April, a total of 406.30 Ha of land was planted towards FY15 cassava crop production (Table 18). This is against the established target of 3,564 Ha. It is anticipated that planting will continue until August.

Table 18: Land preparation and planting for FY15 crop.

| County      | Target area for<br>FY15<br>production (Ha) | Total land cleared<br>for planting by<br>April (Ha) | Actual area<br>planted in April<br>(Ha) |
|-------------|--------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| Bong        | 687.50                                     | 150                                                 | 150.00                                  |
| Nimba       | 1,474.00                                   | 0.00                                                | 0.00                                    |
| Lofa        | 412.50                                     | 6.30                                                | 6.30                                    |
| Grand Bassa | 990.00                                     | 250                                                 | 250.00                                  |
| TOTAL       | 3,564.00                                   | 406.30                                              | 406.30                                  |



Figure 6: Participants of the cassava rapid multiplication training.

Towards the establishment of demonstration farms, USAID FED distributed 3,965 bundles of cassava cuttings (Carica I, Carica 2 and TMS series to 305 Kuus (Table 19). A total of 454 kg of peanuts were distributed to 129 Kuus to demonstrate ISFM in FY15 (Table 20). A total of 66 Ha of demonstration sites have been prepared with mounds and ridges against 324 Ha of demonstration sites to be developed (Table 21).

Table 19: Cuttings distribution to cassava Kuus for demonstration sites.

| County      | Number<br>of Kuus | Number of bundles to<br>be supplied | Number of<br>Kuus<br>supplied<br>with<br>cuttings | Number of bundles supplied | Number of<br>kuus yet to<br>receive<br>cuttings | Number<br>of<br>bundles<br>pending |
|-------------|-------------------|-------------------------------------|---------------------------------------------------|----------------------------|-------------------------------------------------|------------------------------------|
| Bong        | 125               | 1,625                               | 125                                               | 1625                       | 0                                               | 0                                  |
| Nimba       | 268               | 3,484                               | 0                                                 | 0                          | 268                                             | 3,484                              |
| Lofa        | 75                | 975                                 | 0                                                 | 0                          | 75                                              | 975                                |
| Grand Bassa | 180               | 2340                                | 180                                               | 1620                       | 0                                               | 720                                |
| Total       | 648               | 8,424                               | 305                                               | 3,245                      | 343                                             | 5,179                              |

Table 20: Peanut distribution to cassava Kuus for ISFM.

| County      | Number<br>of Kuus | Qty. of peanuts to be supplied (Kg) | Number of<br>Kuus<br>supplied<br>with<br>peanuts | Qty. of peanuts supplied delivered (Kg) | Number<br>of kuus<br>yet to<br>receive<br>peanuts | Qty. of<br>peanuts<br>pending<br>distribution<br>(Kg) |
|-------------|-------------------|-------------------------------------|--------------------------------------------------|-----------------------------------------|---------------------------------------------------|-------------------------------------------------------|
| Bong        | 125               | 938.00                              | 18                                               | 207.00                                  | 107                                               | 731.00                                                |
| Nimba       | 268               | 2,010.00                            | 0                                                | 0.00                                    | 268                                               | 2,010.00                                              |
| Lofa        | 75                | 563.00                              | 0                                                | 0.00                                    | 75                                                | 563.00                                                |
| Grand Bassa | 180               | 1,350.00                            | 28                                               | 247.00                                  | 152                                               | 1103.00                                               |
| Total       | 648               | 4,861.00                            | 46                                               | 454.00                                  | 602                                               | 4,407.00                                              |

Table 21: Demo sites with mounds and ridges

| County      | Target<br>Demos for<br>FYI5 (Ha) | Total land<br>cleared for<br>planting by<br>April (Ha)<br>Demo Sites |
|-------------|----------------------------------|----------------------------------------------------------------------|
| Bong        | 63                               | 20                                                                   |
| Nimba       | 134                              | 0                                                                    |
| Lofa        | 38                               | 6                                                                    |
| Grand Bassa | 90                               | 40                                                                   |
| TOTAL       | 324                              | 66                                                                   |

#### Task I.B.3.4 Recruitment of LNGOs

During the second quarter, five LNGOs were recruited to provide technical assistance and implementation support to USAID FED's FY13, FY14 and FY15 cassava farming groups. All the five LNGOs have deployed staff within the counties.

#### Activity I. B.4 Improving access to market information and market:

#### Task I.B.4.3 Organize meetings between processors and cassava clusters for trade linkages

As a result of meetings organized in quarter two, to link the cassava production clusters with buyers. A total of ten kuus from Bong sold 149.76MT of cassava tuber valued at USD \$17,960.50 to micro-processors during April (Table 22). Also, 36.08 MT cassava tubers valued at USD \$6,084.38 was procured by small processors from cassava farmers in Montserrado County during April.

In April, a sales value of USD \$70,826.25 was accounted for from processed cassava by community-based processors in Bong and Grand Bassa; while a sales value of USD \$9,950 came from small and medium sized processors in Montserrado, which brings the total of USD \$80,776.25 for processed cassava tubers. However, final sales figure from the 31 MT of processed cassava tubers, excluded Liberia Business Incubator (LBI) sales figures, due to the fact that LBI has an export strategy to the USA for a 20-foot container of assorted processed cassava product. In Grand Bassa, the farmers processed cassava from their own farms and did not buy from other farmers.

Table 22: Cassava sales to processors by Kuus.

| County | Volume of tubers<br>procured by<br>processors in<br>April<br>(MT) | Value of tubers<br>procured by<br>processors in<br>April<br>(USD\$) | Volume of processed cassava sold by processors in April (MT) | Value of processed<br>cassava sold by<br>processors in<br>April<br>(USD\$) |
|--------|-------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------|
| Bong   | 149.76                                                            | \$17,960.50                                                         | 97.84                                                        | \$2,606.25                                                                 |
| Nimba  | 0.00                                                              | \$0.00                                                              | 0.00                                                         | \$0.00                                                                     |

| Lofa        | 0.00   | \$0.00      | 0.00   | \$0.00      |
|-------------|--------|-------------|--------|-------------|
| Grand Bassa | 0.00   | \$0.00      | 88.00  | \$68,220.00 |
| Montserrado | 36.08  | 6,084.38    | 31     | \$9,950.00  |
| Total       | 185.84 | \$24,044.88 | 216.84 | \$80,776.25 |

During the quarter two reporting period, USAID FED and RASA Liberia held several discussions on partnership possibilities to support processing and marketing of cassava. A key area under consideration was the establishment of a more effective logistics strategy that would reduce transport costs from the Counties to Monrovia. During April, RASA Liberia, a processor of potato and cassava chips, officially communicated to USAID FED its intention not to partner in this venture since the benefit doesn't outweigh the cost. RASA is committed to processing cassava into chips for as long as the price of cassava tubers of the right variety is competitive. USAID FED will explore the feasibility of supporting youth groups to grow cassava in the periurban areas of Montserrado County for supply of cassava tubers to RASA Liberia.

#### Activity I. B.5 Facilitating access to financial services for processors:

#### Task I.B.5.2 Procure and distribute processing equipment for 22 micro and small processors:

A total of 22 processors have been provided with improved processing equipment by USAID FED by the end of April. Fifteen processors have installed the necessary equipment to increase their processing output. These include small processors (Liberia Business Incubator, FALAMA, Inc. and YAEHD Agri Cassava Processing Centre) and micro-processors (Calvary Baptist Youth Center, Farmer's Resource Center, Welekermah Iron Gate Women, SADI Group, Women in Action for Rehabilitation and Development (WARD), Tohnlo Women, Kukatonon, Welekermah, Nufakolo, Popota, Bomayou and War Affected Women) (Table 23). It is anticipated that the micro-processors will have a production capacity of 3MT of processed cassava per week up from 1 MT, while the Monrovia-based medium-sized processors will increase their outputs from 2MT to 5 MT per week.

Table 23: List of processors with expanded capacities.

| County      | Number of processors | Number of<br>processors<br>supplied with<br>modern<br>equipment | Number of processors with equipment installed |
|-------------|----------------------|-----------------------------------------------------------------|-----------------------------------------------|
| Bong        | 11                   |                                                                 | П                                             |
| Nimba       | 6                    | 3                                                               | 0                                             |
| Lofa        | 3                    | 3                                                               | I                                             |
| Grand Bassa | 3                    | 2                                                               | 0                                             |
| Montserrado | 6                    | 3                                                               | 3                                             |
| TOTAL       | 29                   | 22                                                              | 15                                            |

#### Task 1.B.5.4 Link processors to financial services providers:

By the end of April, a total of 25 cassava processors had been linked to LEAD through the assistance of Component 2. LEAD is currently conducting due diligence on their applications for possible loan approvals and disbursements. This prolonged process has delayed the ability of processors to rehabilitate their facilities within the Counties.

# Task IC: Increased Productivity and Profitability of the Horticulture Value Chain

#### Vegetable harvest and sales from FY14 clusters:

During April, 34MT of vegetables from the FY14 beneficiary farms were harvested and sold for USD \$19,692.41. A total of 152MT of vegetables has been harvested and sold at a value of USD \$111,806.74 year to date (Table 24).

Table 24: FY14 cluster harvest and sales

| County/<br>Cluster | Vegetable<br>type   | Total Sales Volume as of the end of March (Kg) | Total Sales Value<br>as of the end of<br>March (USD\$) | Area<br>Harvested in<br>April | Sales<br>Volume in<br>April<br>(kg) | Sales Value<br>in April<br>(USD\$) | Total Sales<br>Volume YTD<br>(kg) | Total Sales<br>Value YTD<br>(USD\$) |
|--------------------|---------------------|------------------------------------------------|--------------------------------------------------------|-------------------------------|-------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| Montserrado        | Chilli Pepper       | 7,304.84                                       | \$14,704.43                                            | 1.98                          | 2,610.00                            | \$3,540.00                         | 9,914.84                          | \$18,244.43                         |
|                    | Water Melon         | 9,997.27                                       | \$9,856.95                                             | 1.42                          | 3,572.00                            | \$2,373.00                         | 13,569.27                         | \$12,229.95                         |
|                    | Cucumber            | 2,572.09                                       | \$4,461.17                                             | 0.47                          | 919                                 | \$1,074.00                         | 3,491.09                          | \$5,535.17                          |
|                    | Lettuce             | 3,764.37                                       | \$4,457.02                                             | 0.46                          | 1,345.00                            | \$1,073.00                         | 5,109.37                          | \$5,530.02                          |
|                    | African<br>Eggplant | 6,714.30                                       | \$4,972.55                                             | 0.81                          | 2,399.00                            | \$1,197.11                         | 9,113.30                          | \$6,169.66                          |
|                    | Bitter ball         | 2,748.41                                       | \$1,997.97                                             | 0.39                          | 982                                 | \$481.00                           | 3,730.41                          | \$2,478.97                          |
|                    | Cabbage             | 2,183.06                                       | \$1,712.61                                             | 0.21                          | 780                                 | \$412.30                           | 2,963.06                          | \$2,124.91                          |
|                    | Corn                | 11,612.18                                      | \$7,244.21                                             | 2.32                          | 4,149.00                            | \$1,744.00                         | 15,761.18                         | \$8,988.21                          |
| Sub Total          |                     | 39,591.68                                      | \$49,406.91                                            | 8.06                          | 16,756.00                           | \$11,894.41                        | 63,652.52                         | \$61,301.32                         |
| Nimba              | Chilli Pepper       | 2,700.00                                       | \$1,600                                                | 0.00                          | 0.00                                | \$0.00                             | 2,700.00                          | \$1,600                             |
|                    | Bitter ball         | 2,150.00                                       | \$1,450                                                | 0.00                          | 0.00                                | \$0.00                             | 2,150.00                          | \$1,450                             |
|                    | Water Melon         | 2,250.00                                       | \$1,525                                                | 0.00                          | 0.00                                | \$0.00                             | 2,250.00                          | \$1,525                             |
|                    | Cabbage             | 900.00                                         | \$775                                                  | 0.00                          | 0.00                                | \$0.00                             | 900.00                            | \$775                               |
|                    | African<br>Eggplant | 1,000.00                                       | \$823.20                                               | 0.00                          | 0.00                                | \$0.00                             | 1,000.00                          | \$823.20                            |
| Sub Total          | 551                 | 9,000.00                                       | \$6,173.20                                             | 0.00                          | 0.00                                | \$0.00                             | 9,000.00                          | \$6,173.20                          |
| Margibi            | Cucumber            | 6,408.02                                       | \$4,360.67                                             | 0.285                         | 1,840.00                            | \$1,027.00                         | 8,248.02                          | \$5,387.67                          |
|                    | Water Melon         | 1,929.37                                       | \$908.65                                               | 0.165                         | 554                                 | \$214.00                           | 2,483.37                          | \$1,122.65                          |
|                    | Pepper              | 5,272.69                                       | \$4,054.96                                             | 0.4                           | 1,514.00                            | \$955.00                           | 6,786.69                          | \$5,009.96                          |
|                    | Bitter ball         | 37,612.30                                      | \$16,232.58                                            | 1.43                          | 10,800.00                           | \$3,823.00                         | 48,412.30                         | \$20,055.58                         |
|                    | Eggplant            | 6,251.30                                       | \$1,486.11                                             | 0.48                          | 1,795.00                            | \$350.00                           | 8,046.30                          | \$1,836.11                          |
|                    | Lettuce             | 2,925.40                                       | \$4,836.23                                             | 0.41                          | 840.00                              | \$1,139.00                         | 3,765.40                          | \$5,975.23                          |
|                    | Corn                | 870.66                                         | \$878.93                                               | 0.04                          | 250.00                              | \$207.00                           | 1,120.66                          | \$1,085.93                          |
|                    | Cabbage             | 348.26                                         | \$352.42                                               | 0.03                          | 100.00                              | \$83.00                            | 448.26                            | \$435.42                            |
| Sub Total          |                     | 61,618.00                                      | \$33,110.55                                            | 3.24                          | 17,693.00                           | \$7,798.00                         | 79,311.00                         | \$40,908.55                         |
| Grand Bassa        | Chilli Pepper       | 19.00                                          | \$424.00                                               | 0.00                          | 0.00                                | \$0.00                             | 19.00                             | \$424.00                            |
|                    | Water Melon         | 21.00                                          | \$567.00                                               | 0.00                          | 0.00                                | \$0.00                             | 21.00                             | \$567.00                            |

|           | Bitter ball         | 30.00      | \$912.67    | 0.00  | 0.00      | \$0.00      | 30.00      | \$912.67     |
|-----------|---------------------|------------|-------------|-------|-----------|-------------|------------|--------------|
|           | African<br>Eggplant | 25.00      | \$520.00    | 0.00  | 0.00      | \$0.00      | 25.00      | \$520.00     |
|           | Cucumber            | 33.00      | \$1,000.00  | 0.00  | 0.00      | \$0.00      | 33.00      | \$1,000.00   |
| Sub Total |                     | 128.00     | \$3,423.67  | 0.00  | 0.00      | \$0.00      | 128.00     | \$3,423.67   |
| Total     |                     | 117,642.51 | \$92,114.33 | 11.30 | 34,449.00 | \$19,692.41 | 152,091.51 | \$111,806.74 |

#### **Vegetable harvest and sales from FYI5 clusters:**

During April, 112MT of vegetables was produced and sold for USD \$68,084.69. A total of 249MT of vegetables have been harvested and sold for USD \$196,231.71 year to date (Table 25).

Table 25: FY15 cluster harvest and sales.

| County/<br>Cluster | Vegetable<br>type   | Total Sales Volume as of the end of March (Kg) | Total Sales Value as<br>of the end of March<br>(USD\$) | Area<br>Harvested | Sales<br>volume in<br>April<br>(Kg) | Sales Value<br>in April<br>(USD\$) | Total sales<br>volume YTD<br>(kg) | Total sales<br>value YTD<br>(USD\$) |
|--------------------|---------------------|------------------------------------------------|--------------------------------------------------------|-------------------|-------------------------------------|------------------------------------|-----------------------------------|-------------------------------------|
| Montserrado        | Chilli Pepper       | 23,162.99                                      | \$44,234.39                                            | 1.59              | 4,051.00                            | \$7,119.00                         | 27,213.99                         | \$51,353.39                         |
|                    | Water Melon         | 6,192.43                                       | \$932.04                                               | 0.21              | 1,083.00                            | \$150.00                           | 7,275.43                          | \$1,082.04                          |
|                    | Cucumber            | 18,817.43                                      | \$13,365.38                                            | 0.37              | 3,291.00                            | \$2,151.00                         | 22,108.43                         | \$15,516.38                         |
|                    | Lettuce             | 4,980.24                                       | \$5,399.59                                             | 0.23              | 871.00                              | \$869.00                           | 5,851.24                          | \$6,268.59                          |
|                    | African<br>Eggplant | 1,492.36                                       | \$2,852.03                                             | 0.25              | 261.00                              | \$459.00                           | 1,753.36                          | \$3,311.03                          |
|                    | Bitter ball         | 10,292.12                                      | \$6,462.11                                             | 0.25              | 1,800.00                            | \$1,040.00                         | 12,092.12                         | \$7,502.11                          |
|                    | Cabbage             | 8,033.57                                       | \$8,537.44                                             | 0.38              | 1,405.00                            | \$1,374.00                         | 9,438.57                          | \$9,911.44                          |
|                    | Raddish             | 15,203.75                                      | \$3,075.72                                             | 0.24              | 2,659.00                            | \$495.00                           | 17,862.75                         | \$3,570.72                          |
|                    | Corn                | 4,145.44                                       | \$3,529.31                                             | 0.21              | 725.00                              | \$568.00                           | 4,870.44                          | \$4,097.31                          |
| Sub Total          |                     | 92,320.33                                      | \$88,388.00                                            | 3.73              | \$16,146.00                         | \$14,225.00                        | \$108,466.33                      | \$102,613.00                        |
| Margibi            | Pepper              | 8,485.95                                       | \$16,530.80                                            | 6.45              | 31,628.00                           | \$24,164.00                        | \$40,113.95                       | \$40,694.80                         |
|                    | Bitter ball         | 7,764.48                                       | \$5,258.74                                             | 4.74              | 28,939.00                           | \$7,687.00                         | \$36,703.48                       | \$12,945.74                         |
|                    | Corn                | 1,631.03                                       | \$1,047.37                                             | 1.07              | 6,079.00                            | \$1,531.00                         | \$7,710.03                        | \$2,578.37                          |
|                    | Lettuce             | 772.72                                         | \$1,726.01                                             | 0.40              | 2,880.00                            | \$2,523.00                         | \$3,652.72                        | \$4,249.01                          |
|                    | Cabbage             | 1,925.36                                       | \$3,734.55                                             | 1.15              | 7,176.00                            | \$5,459.00                         | \$9,101.36                        | \$9,193.55                          |
|                    | Eggplant            | 1,157.47                                       | \$839.40                                               | 1.21              | 4,314.00                            | \$1,227.00                         | \$5,471.47                        | \$2,066.40                          |
|                    | Water Melon         | 1,685.76                                       | \$2,143.31                                             | 0.64              | 6,283.00                            | \$3,133.00                         | \$7,968.76                        | \$5,276.31                          |
|                    | Okra                | 256.23                                         | \$362.58                                               | 0.35              | 955.00                              | \$530.00                           | \$1,211.23                        | \$892.58                            |
| Sub Total          |                     | 23,679.00                                      | \$31,642.75                                            | 16.01             | 88,254.00                           | \$46,254.00                        | 111,933.00                        | \$77,896.75                         |
| Bong               | Bitter Ball         | 331.66                                         | \$450.77                                               | 1.37              | 54.00                               | \$661.00                           | 385.66                            | \$1,111.77                          |
|                    | Pepper              | 1,302.08                                       | \$853.11                                               | 1.08              | 212.00                              | \$1,251.00                         | 1,514.08                          | \$2,104.11                          |
|                    | Okra                | 141.26                                         | \$154.12                                               | 0.8               | 23.00                               | \$226.00                           | 164.26                            | \$380.12                            |
| Sub Total          |                     | 1,775.00                                       | \$1,458.00                                             | 3.25              | 289.00                              | \$2,138.00                         | 2,064.00                          | \$3,596.00                          |
| Nimba              | Chilli Pepper       | 4,021.38                                       | \$2,159.98                                             | 0.95              | 1,400.00                            | \$1,441.18                         | 5,421.38                          | \$3,601.16                          |

|             | Water Melon         | 3,159.66   | \$779.35     | 0.5   | 1,100.00   | \$520.00    | 4,259.66   | \$1,299.35   |
|-------------|---------------------|------------|--------------|-------|------------|-------------|------------|--------------|
|             | Cucumber            | 287.24     | \$374.69     | 0.28  | 100.00     | \$250.00    | 387.24     | \$624.69     |
|             | Bitter Ball         | 3,446.9    | \$1,234.38   | 0.25  | 1,200.00   | \$823.60    | 4,646.90   | \$2,057.98   |
|             | Cabbage             | 5,744.83   | \$790.42     | 0.25  | 2,000.00   | \$527.38    | 7,744.83   | \$1,317.80   |
| Sub Total   |                     | 16,660.00  | \$5,338.82   | 2.23  | 5,800.00   | \$3,562.16  | 22,460.00  | \$8,900.98   |
| Grand Bassa | Chilli Pepper       | 876.21     | \$704.23     | 0.61  | 470.0      | \$932.91    | 1,346.21   | \$1,637.14   |
|             | Water melon         | 279.64     | \$18.95      | 0.04  | 150.0      | \$25.11     | 429.64     | \$44.06      |
|             | Cucumber            | 119.31     | \$36.84      | 0.08  | 64.0       | \$48.80     | 183.31     | \$85.64      |
|             | Okra                | 1.49       | \$3.23       | 0.04  | 0.80       | \$4.28      | 2.29       | \$7.51       |
|             | African<br>Eggplant | 102.53     | \$37.52      | 0.10  | 55.00      | \$49.70     | 157.53     | \$87.22      |
|             | Bitter ball         | 76.43      | \$19.77      | 0.10  | 41.00      | \$26.19     | 117.43     | \$45.96      |
|             | Potato<br>Greens    | 37.29      | \$44.93      | 0.02  | 20.00      | \$59.52     | 57.29      | \$104.45     |
|             | Corn                | 548.09     | \$235.53     | 0.24  | 294        | \$312.02    | 842.09     | \$547.55     |
| Sub total   |                     | 2,041.00   | \$1,101.00   | 1.23  | 1,094.80   | \$1,458.53  | 3,135.80   | \$2,559.53   |
| Lofa        | Chilli Pepper       | 50.00      | \$104.58     | 0.33  | 225.00     | \$214.00    | 274.69     | \$318.58     |
|             | Water melon         | 133.00     | \$81.12      | 0.20  | 600.00     | \$166.00    | 732.50     | \$247.12     |
|             | Cucumber            | 0.00       | \$0.00       | 0.00  | 0.00       | \$0.00      | 0.00       | \$0.00       |
|             | Okra                | 0.00       | \$0.00       | 0.00  | 0.00       | \$0.00      | 0.00       | \$0.00       |
|             | African<br>Eggplant | 0.00       | \$0.00       | 0.00  | 0.00       | \$0.00      | 0.00       | \$0.00       |
|             | Bitter ball         | 83.00      | \$32.74      | 0.3   | 375.00     | \$67.00     | 457.81     | \$99.74      |
|             | Potato<br>Greens    | 0.00       | \$0.00       | 0.00  | 0.00       | \$0.00      | 0.00       | \$0.00       |
|             | Corn                | 0.00       | \$0.00       | 0.00  | 0.00       | \$0.00      | 0.00       | \$0.00       |
| Sub Total   |                     | 265.00     | \$218.45     | 0.83  | 1,200.00   | \$447.00    | 1465.00    | \$665.45     |
| Total       | 1                   | 136,740.33 | \$128,147.02 | 27.28 | 112,783.80 | \$68,084.69 | 249,524.13 | \$196,231.71 |

#### Establishment of rain shelters on FY14 sites:

During March, it was decided that the proposed site in Bokays town be moved to Grain Coast Inc.'s vegetable production site in Careysburg , Montserrado County. By the end of April, Grain Coast Inc. was yet to prepare the site for installation of the greenhouse despite several follow-ups from USAID FED staff. In the 19 rain shelters planted with cabbage and cucumber, growth deficiencies were observed due to high temperatures, which in some rain shelters were recorded by a data logger to be as high as  $50^{\circ}$ c during daytime and 28 °c during the night time. USAID FED's Horticulture Specialist recommended that additional netting on the sides and doors be added to the greenhouse to expand ventilation. Temperatures are expected to be much cooler during the rainy season when production can be conducted under better conditions.



Figure 7: Rain shelter at White planes showing stunted growth in cucumber.

#### Activity I.C.I Improving access to affordable seeds of improved vegetable varieties

#### Task I.C.1.3 Identify financing needs of continuing and new farmers:

No additional clusters accessed loans from LEAD in April. The loans given to the three clusters in Montserrado County in March were used to buy vegetable seeds, pesticides, fertilizers and tools for FY15 production of vegetables.

#### **Activity 1.C.2: Promoting Integrated Pests Management Practices**

#### Task I.C.2.1 Identify 3,750 high value and local vegetable farmers and establish 188 demonstration plots in 6 counties:

By the end of April, 13 demonstration sites had been established across the six counties, totaling 4.59ha (Table 26). It is anticipated that establishment of the remaining five demonstration sites will be completed by

Table 26: Established demonstration sites for FY15 production by County.

| County      | Targets | No. of demonstration | Area cultivated up to |
|-------------|---------|----------------------|-----------------------|
|             |         | sites                | date (hectare)        |
| Montserrado | 3       | 3                    | 1                     |
| Margibi     | 3       | 3                    | 2.4                   |
| Bong        | 3       | 2                    | 2                     |
| Nimba       | 3       | 3                    | 0.75                  |
| Lofa        | 3       | 0                    | 0                     |
| Bassa       | 3       | 2                    | 0.6                   |
| Total       | 18      | 13                   | 6.75                  |

#### Task 1.C.2.2 Provide Demos with improved seeds and pesticides to demonstrate IPM:

By the end of April, 18 demonstration sites had been provided with high value vegetable seed varieties. Pesticides were procured and will only be utilized when the need arises on a cluster to cluster basis.

#### Task 1.C.2.3: Train 188 lead farmers on GAP, IPM, Production planning and appropriate harvesting:

From March 30 to April 3, USAID FED conducted training on Good Agricultural Practices (GAP) and Integrated Pest Management (IPM) for a total of 35 participants (2 MoA extension staff, 26 LNGO staff, 7 USAID FED extension officers and I extension staff) at Mensah Farm in Montserrado County (Table 3). This training was designed to be cluster, Montserrado County. practical, particularly focusing on Agro Ecosystem Analysis methods.



Figure 8: Demonstrative training on Agro Eco System Analysis (AESA) at Mensah

During agro ecosystem analysis training, participants are taught how to perform ecological, sociological and political analysis of their agricultural environment in order to plan and develop agricultural activities (cultivation, irrigation etc...). At the end of the training, participants are able to gather socio economic, political and ecological information which they can use to identify key issues or problems within their ecosystem e.g. they can understand the effects of rainfall and soil types on their farming activities. The knowledge will be imparted to vegetable lead farmers during field extension service provision.

Table 27: Training participants.

| Name of Organization              | Number of participants | Male | Female |
|-----------------------------------|------------------------|------|--------|
| Gborkwado Development Association | 4                      | 4    | 0      |
| Human Development Foundation      | 17                     | 16   | I      |
| TECURD                            | 4                      | 4    | 0      |
| VADEMCO                           | I                      | I    | 0      |
| МоА                               | 2                      | 2    | 0      |
| USAID FED                         | 7                      | 6    | I      |
| Total                             | 35                     | 33   | 2      |

#### Task I.C.2.6 Recruitment of Horticulture Specialist (STTA)

During April, USAID FED's Horticulture Specialist provided technical assistance to four vegetable clusters in demonstrating plot layouts, seedling maintenance, transplanting, fertilizer application and rain shelter maintenance. The Horticulture Specialist also inspected the rain shelter installation by the contracted vendor, AIM Global, in Mensah cluster and the zero energy cooler at red light market in Monrovia. The Horticulture Specialist also conducted training for 35 extension officers from the MoA, LNGO's and USAID FED on GAP, composting, IPM and post-harvest handling from March 30 to April 3, 2015.

# Activity I.C.3 Reducing harvesting and post-harvest losses



Figure 9: Participants taking notes during demonstrations on composting for Extension Officers.

# Task 1.C.3.2: Identify five new traders associations in Bong, Nimba, Grand Bassa, Lofa and Margibi Counties:

During April, five traders associations were identified in the the following Counties: Margibi - Kakata Marketing Association located in Kakata; Bong - Gbarnga Marketing Association located in Gbarnga; Grand Bassa - Buchannan Marketing Association located in Buchanan; Nimba - Ganta Marketing Association located in Ganta; and Lofa - Voinjama Marketing Association located in Voinjama. These associations signed MoUs, which were submitted to the USAID FED for COP signature.

# Task 1.C.3.3: Training Lead farmers and trader association on packaging, storage and transportation methods:

The establishment of charcoal and zero energy coolers commenced in April. The training of traders associations and lead farmers on these technologies will take place in June once all the coolers have been constructed.

# Task 1.C.3.5: Provide Lead Farmers and traders with packing crates for transportation of vegetables through cost-share:

During April, Gro Green supplied USAID FED with 1,190 packing crates. The distribution of these crates to the clusters and traders associations will be completed in May (Tables 28 and 29).

Table 28: Distribution plan for packaging crates per cluster

| County      | Number of clusters | Number of crates per | Total Number of crates |
|-------------|--------------------|----------------------|------------------------|
|             |                    | cluster              | per county             |
| Montserrado | 51                 | 5                    | 255                    |
| Margibi     | 38                 | 5                    | 190                    |
| Bong        | 27                 | 5                    | 135                    |
| Nimba       | 28                 | 5                    | 140                    |
| Lofa        | 25                 | 5                    | 125                    |
| Bassa       | 19                 | 5                    | 95                     |
| Total       | 188                |                      | 940                    |

Table 29: Distribution plan for packaging crates for traders associations.

| County  | Number of<br>Association | Number of<br>crates per<br>Association |
|---------|--------------------------|----------------------------------------|
| Margibi | I                        | 50                                     |
| Bong    | I                        | 50                                     |
| Nimba   | I                        | 50                                     |
| Lofa    | I                        | 50                                     |
| Bassa   | I                        | 50                                     |
| Total   | 5                        | 250                                    |

# Task 1.C.3.6: Provide 6 traders associations with low cost charcoal cooler technologies on cost share:

During April, the contracted vendor Hammer Inc. supplied USAID FED with construction materials for the remaining zero energy and charcoal coolers. Distribution of the materials commenced in April across 23 sites in six counties. It is anticipated that all the technologies will be installed before the end of June. One zero energy cooler was installed at the Monrovia Vegetable Traders Association site in Red Light, and tested. The cooler demonstrated a reduction of temperature by 3 to 5 degrees Celsius in comparison to the outside temperature.



Figure 10: Vegetable preservation in zero energy cooler at Red Light Market.





Figure 11: Comparison of vegetables preserved in Zero energy cooler and vegetables stored in outside the cooler. The vegetables on the left were stored outside the cooler while the ones on the right were inside the cooler.

#### Task 1.C.3.7: Provide 2 private sector firms with cold storage facilities on cost share:

During April, ROSNA and Grain Coast Inc. signed MoUs with USAID FED towards cost sharing on refrigerated containers. The two firms have also been linked to LEAD for possible loan financing. Green Field, the contracted vendor has informed USAID FED that the three refrigerated containers will be delivered during the first week of July.

#### Activity I.C.4: Farmers produced vegetables for the markets during the dry and wet seasons

#### Task I.C.4.1: Procure, distribute and install 360 drip irrigation kits to high value vegetable producers:

By the end of April, the contracted vendor Gro Green had still not supplied the drip irrigation kits to USAID FED due to problems with obtaining the duty-free waiver. This implies that with the onset of the rainy season in June, the clusters will only start utilizing the drip irrigation kits during the dry season commencing in November 2015.

#### Task 1.C.4.2: Procure and distribute motorized pumps to 188 clusters:

By the end of April, the contracted vendor Gro Green had still not supplied the motorized pumps to USAID FED due to problems with obtaining the duty-free waiver. This implies that with the onset of the rainy season in June, the clusters will only start utilizing the motorized pumps during the dry season commencing in November 2015.

# Task I.C.4.3: Procure and distribute vegetable seeds as start- up seeds, pesticides and tools as start-up kits to 360 farmers:

During April, Gro Green supplied pesticides to USAID FED for onward distribution to the Counties for the effective control of pests and diseases affecting vegetable crops (Table 30). Distribution of these chemicals will be completed in May.

Table 30: Pesticides procured for controlling weeds, vegetable pests and diseases.

| Description       | Quantity | Unit   |
|-------------------|----------|--------|
| Copper Oxide      | 80,000   | Grams  |
| Metalaxyl         | 800      | Liters |
| Deltermethmethrin | 118      | Liters |
| Glyphosate        | 118      | Liters |

#### Task I.C.4.5: Improve wet season production through protected cultivation

During April, the contracted vendor Aim Global delivered 18 rain shelter kits to 18 high value vegetable clusters in five counties (Table 31). Aim Global commenced installation of shelters during the end of April.

Table 31: Rain shelter distribution plan.

| County      | Number of high<br>value vegetable<br>sites | Number of rain shelters delivered |
|-------------|--------------------------------------------|-----------------------------------|
| Montserrado | 6                                          | 6                                 |
| Margibi     | 5                                          | 5                                 |
| Bong        | 2                                          | 2                                 |
| Nimba       | 3                                          | 3                                 |
| Bassa       | 2                                          | 2                                 |
| Total       | 18                                         | 18                                |

#### Task I.C.4.6: Enhancing linkages with local and high value vegetable markets:

USAID FED had already distributed 2,000 grams of Okra seeds to GCI, CHAP and the two youth groups in March. Grain Coast has committed to ensuring that the contracts are signed with the youth groups at the beginning of May in order to ensure that the youth groups have a guaranteed market as out-growers. So far, a total of 11 ha have been cultivated with okra for export with an outstanding 3ha to be cultivated by GCI. Additionally, a total of 1,039kg of vegetables sold by USAID FED farmers were purchased by ROSNA from both FY14 and FY15 clusters in Yekepa, Nimba County.

#### Task ID: Increased Productivity and Profitability of the Goat Value Chain

#### FY14 Goat production sites - kidding and mortality rates:

During April, a total of 384 new kids (138 male and 246 female) were born in the FY14 goat production intensification sites (Table 32). The total herd size in FY14 goat production intensification sites stands at 7,442 goats (4,099 does, 1,132 bucks and 2,211 kids). At the end of April, a total of 304 kids (115 males and 189 females) born during the month of November 2014 reached maturity and were added to the Does and Bucks statistics. 546 kids born in December 2014 should reach maturity in May and will be added to the Bucks and Does statistics.

Table 32: FY 14 Goat herd statistics

| County         | Number<br>of<br>farmers<br>supported<br>in FY14 | Number<br>of Males | Number<br>of<br>Females | Total<br>number<br>of<br>Goats<br>in herd | Number<br>of Does | Number<br>of Bucks | Remaining<br>kids for<br>QI that<br>have not<br>been<br>weaned | Total<br>number<br>of Kids<br>recorded<br>in Q2 | Total<br>number<br>of kids<br>recorded<br>in April |
|----------------|-------------------------------------------------|--------------------|-------------------------|-------------------------------------------|-------------------|--------------------|----------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|
| Nimba          | 637                                             | 341                | 296                     | 1,278                                     | 551               | 235                | 175                                                            | 239                                             | 78                                                 |
| Grand<br>Bassa | 277                                             | 166                | 111                     | 1,426                                     | 1,025             | 265                | 46                                                             | 50                                              | 40                                                 |
| Bong           | 672                                             | 493                | 179                     | 2,766                                     | 1,706             | 408                | 162                                                            | 322                                             | 168                                                |
| Lofa           | 474                                             | 260                | 214                     | 1,972                                     | 817               | 224                | 163                                                            | 670                                             | 98                                                 |
| Total          | 2,060                                           | 1,260              | 800                     | 7,442                                     | 4,099             | 1,132              | 546                                                            | 1,281                                           | 384                                                |

During April, two kids were reported dead in Nimba County. Four does and one buck were reported dead in Bong County. The causes of death of the two kids in Nimba were attributed to lack of feeding after the mother of the kids was stolen. In Bong County, the causes of death were attributed to diarrhea and pneumonia. A total of 42 goats have been recorded as having died since January 2015 (Table 33).

Table 33: Animal mortality - FY14 sites

| County      | Mortality recorded in Q2 | Mortality recorded in April | Total Mortality YTD |
|-------------|--------------------------|-----------------------------|---------------------|
| Bong        | 8                        | 5                           | 13                  |
| Nimba       | 2                        | 2                           | 4                   |
| Lofa        | 17                       | 0                           | 17                  |
| Grand Bassa | 8                        | 0                           | 8                   |
| TOTAL       | 27                       | 7                           | 42                  |

#### FY14 goat production sites - sales:

In April, a total of 243 goats were sold for USD \$16,890.00. In total, 2,615 goats from the FY14 production intensification sites have been sold for USD \$139,432.78 since the beginning of FY15 (Table 34).

Table 34: Goat sales from FY14 goat production sites.

| County         | FYI5<br>Goat<br>sales<br>target | FYI5 Goat<br>Sales<br>Target<br>(USD\$) | Number<br>of goats<br>sold QI<br>FYI5 | Value of<br>goats sold<br>QI FYI5 | Number<br>of goats<br>sold Q2<br>FYI5 | Value of<br>goats sold<br>Q2 FY15<br>(USD\$) | Number<br>of goats<br>sold in<br>April<br>FY15 | Value of<br>goats sold<br>in April<br>FYI5 | Number<br>of goats<br>sold<br>YTD | Value of<br>goats sold<br>YTD<br>(USD\$) |
|----------------|---------------------------------|-----------------------------------------|---------------------------------------|-----------------------------------|---------------------------------------|----------------------------------------------|------------------------------------------------|--------------------------------------------|-----------------------------------|------------------------------------------|
| Nimba          | 932                             | \$65,280.00                             | 142                                   | \$6,395.78                        | 178                                   | \$8,560.00                                   | 65                                             | \$4,375.00                                 | 385                               | \$19,330.78                              |
| Grand<br>Bassa | 330                             | \$23,040.00                             | 133                                   | \$8,475.00                        | 67                                    | \$4,140.00                                   | 28                                             | \$1,820.00                                 | 228                               | \$14,435.00                              |
| Bong           | 795                             | \$55,680.00                             | 388                                   | \$32,070.00                       | 331                                   | \$27,645.00                                  | 104                                            | \$8,600.00                                 | 823                               | \$68,315.00                              |
| Lofa           | 686                             | \$48,000.00                             | 310                                   | \$13,177.00                       | 823                                   | \$22,080.00                                  | 46                                             | \$2,095.00                                 | 1179                              | \$37,352.00                              |
| Total          | 2,743                           | \$192,000.00                            | 973                                   | \$60,117.78                       | 1,399                                 | \$62,425.00                                  | 243                                            | \$16,890.00                                | 2,615                             | \$139,432.78                             |

#### FY14 goat production sites veterinary care:

During April, 140 animals in five communities in Bong and Nimba were treated by ten Community Animal Health Workers (CAHWs) trained by FED in FY14 for various illnesses including internal and external parasites, physical injuries and diarrhea (Table 35). The ten CAHWS bought veterinary drugs valued at USD \$28 from agro-pharmacists. They charge 14 Liberian Dollar for each animal treated. The total revenue they earned for treating 140 animals was USD \$23 (at 84 LRD to USD \$1 conversion rate). The remaining drugs are sufficient to treat 3192 animals, which will mean additional revenue of USD \$34. This means that their total expected revenue will be USD \$57, giving them an overall gross margin of USD \$29.

Table 35: Animals that received veterinary care.

| County      | Total number of animals treated in Q2 | Number of<br>animal treated<br>in April FY15 | Total number of animals treated YTD |
|-------------|---------------------------------------|----------------------------------------------|-------------------------------------|
| Nimba       | 144                                   | 58                                           | 202                                 |
| Bong        | 375                                   | 61                                           | 436                                 |
| Lofa        | 29                                    | 0                                            | 29                                  |
| Grand Bassa | 254                                   | 21                                           | 275                                 |
| Total       | 802                                   | 140                                          | 942                                 |

During the month of May, USAID FED will conduct a survey to ascertain the profitability of FY14 CAHWS and Agro-pharmacists. These CAHWS and Agro-pharmacists will also be supported under Component 2 to register their businesses and develop viable business plans.

#### FY15 Goat production sites - kidding

During April, a total of 516 new kids (181 male and 335 female) were born in the FY15 goat production intensification sites (Table 36). The total herd size in FY15 goat production intensification sites stands at 6,493 goats (3,346 does, 1,432 bucks and 1,715 kids).

Table 36: FY 15 Goat herd statistics.

| County      | Number<br>of farmers<br>in FY 15 | Number<br>of Male<br>famers | Number<br>of Female<br>farmers | Total<br>number<br>of Goats<br>in herd | Number<br>of Does | Number<br>of Bucks | Number<br>of Kids as<br>of end of<br>March<br>2015 | Kids born<br>in April to<br>FY15<br>Beneficiar<br>y herds | FY15<br>Beneficiary<br>Herds Total<br>Kids YTD |
|-------------|----------------------------------|-----------------------------|--------------------------------|----------------------------------------|-------------------|--------------------|----------------------------------------------------|-----------------------------------------------------------|------------------------------------------------|
| Nimba       | 522                              | 316                         | 206                            | 1,707                                  | 928               | 245                | 347                                                | 187                                                       | 534                                            |
| Grand Bassa | 268                              | 168                         | 100                            | 518                                    | 314               | 142                | 36                                                 | 26                                                        | 62                                             |
| Bong        | 625                              | 478                         | 147                            | 2,454                                  | 1,499             | 413                | 374                                                | 168                                                       | 542                                            |
| Lofa        | 421                              | 277                         | 144                            | 1,814                                  | 605               | 632                | 442                                                | 135                                                       | 577                                            |
| Total       | 1,836                            | 1,239                       | 597                            | 6,493                                  | 3,346             | 1,432              | 1,199                                              | 516                                                       | 1715                                           |

#### FY15 goat production sites - sales:

In April, a total of 243 goats were sold for USD \$15,165.00. In total, 1,247 goats from the FY15 production intensification sites have been sold for USD \$67,017(Table 37).

Table 37: Goat sales from FY15 goat production sites.

| County         | Number<br>of goats<br>sold Q2 | Value of<br>goats sold<br>Q2<br>(USD\$) | Number<br>of goats<br>sold<br>April<br>FY15 | Value of<br>goats sold<br>April<br>FY15<br>(USD\$) | Number<br>of goats<br>sold<br>YTD | Value of<br>goats sold<br>YTD<br>(USD\$) |
|----------------|-------------------------------|-----------------------------------------|---------------------------------------------|----------------------------------------------------|-----------------------------------|------------------------------------------|
| Nimba          | 308                           | \$16,741.00                             | 39                                          | \$1,650.00                                         | 347                               | \$18,391.00                              |
| Grand<br>Bassa | 66                            | \$3,480.00                              | 15                                          | \$975.00                                           | 81                                | \$4,455.00                               |
| Bong           | 297                           | \$14,561.00                             | 104                                         | \$8,600.00                                         | 401                               | \$23,161.00                              |
| Lofa           | 333                           | \$17,070.00                             | 85                                          | \$3,940.00                                         | 418                               | \$21,010.00                              |
| TOTAL          | 1004                          | \$51,852.00                             | 243                                         | \$15,165.00                                        | 1247                              | \$67,017.00                              |

During April, two bucks and one doe were reported dead in Nimba County. Three does and two bucks were reported dead in Bong County and 2 bucks were reported dead in Grand Bassa County. The causes of death of the two bucks and one doe in Nimba were attributed to diarrhea. In Bong County, the causes of death were attributed to pneumonia, while in Grand Bassa County, the causes of the two bucks were attributed to a road accident (I buck) and tethering(I buck). A total of 53 goats have been recorded as having died since January 2015 (Table 38).

Table 38: Animal mortality - FY15 sites.

| County      | Mortality<br>recorded<br>Q2 from<br>FY 15<br>sites | Mortality<br>recorded<br>in April<br>from FY<br>15 sites | Total Mortality YTD from FY 15 sites |  |
|-------------|----------------------------------------------------|----------------------------------------------------------|--------------------------------------|--|
| Bong        | 8                                                  | 5                                                        | 13                                   |  |
| Nimba       | 4                                                  | 3                                                        | 7                                    |  |
| Lofa        | 29                                                 | 0                                                        | 29                                   |  |
| Grand Bassa | 2                                                  | 2                                                        | 4                                    |  |
| TOTAL       | 43                                                 | 10                                                       | 53                                   |  |

#### **Activity I.D.I Promote Goat Shelters**

#### Task I.D.I.2 Contract and train 8 sawyers to cut wood for shelter construction:

In February, four Local NGO's (LNGO's) were contracted to provide technical assistance to the goat production intensification sites in FY15. These included the Gborkwado Development Association (Nimba), Liberia Integrated Professional Agricultural Services (Lofa), the Human Development Foundation (Bong) and the Community Youth Network Program (Grand Bassa). In March, the four LNGOs recruited a total of 35 sawyers to cut wood provided by the beneficiary communities based on the level of effort required to produce sufficient planks. By the end of April, the sawyers have produced 12,506 pieces of planks towards construction of goat shelters (Table 39). These planks are sufficient for the construction of shelters on 28 sites.

Table 39: Sawyer recruitment by County and pieces of wood produced in customized sizes for shelter construction.

| County         | Number<br>of<br>Sawyers<br>recruited | Male | Female | Pieces<br>plank<br>produc | s      | otal Goat Shelters to<br>be Constructed |  |
|----------------|--------------------------------------|------|--------|---------------------------|--------|-----------------------------------------|--|
| Nimba          | 12                                   | 12   | 0      | 5,650                     | )      | 26                                      |  |
| Bong           | 6                                    | 6    | 0      | 2,300                     | )      | 22                                      |  |
| Grand<br>Bassa | 10                                   | 10   | 0      | 660                       |        | 19                                      |  |
| Lofa           | 7                                    | 7    | 0      | 3,896                     | •      | 10                                      |  |
| Total          | 35                                   |      | 35     | 0                         | 12,506 | 77                                      |  |

# Task I.D.I.3 Contract and train 8 carpenters (2 per county) on shelter construction:

During the quarter two reporting period, the four LNGOs contracted a total of 45 carpenters to oversee goat shelter construction in the counties. On April 14 and 15, the 45 carpenters received training on specific design of goat shelters from FED. The construction of the shelters will commence from May on sites where sawing of wood has progressed significantly.



Figure 12: Planks produced by sawyers at Hard Rock goat site in Sanniquellie, Nimba County.

#### Task I.D.I.5 Design and construction of 2 wells in Grand Bassa County

During April, construction of the two water wells for the FY14 goat production intensification sites in Neorpeh and Blaygbah in Grand Bassa County commenced. The construction is being supervised by the Organized Community for Reconstruction and Rehabilitation (OCRAR) Company. It is anticipated that the two wells will be completed and operational by the end of May.

#### Task I.D.I.7 Construct 77 shelters in Bong, Nimba, Lofa, and Grand Bassa through cost share:

During April, the distribution of shelter construction material for all sites was completed across the four counties. These included Zinc (roofing sheets), galvanized fence wire, hinges, drinkers (tub) and wire nails.

#### Task I.D.I.10 Herd production and Salt Lick fabrication training for satellite communities:

During April, 124 livestock chairmen were mobilized across the four counties to be trained on salt lick fabrication. The training will in turn benefit 2,480 goat producers outside of the production intensification sites. The 124 livestock chairmen will also receive mineral/salt lick materials (Oyster shells, salt and cement). The training is scheduled for the first and second week of May.

#### **Activity I.D.2 National PPR Campaign**

# Task I.D.2.I Acquire MoA agreement to provide PPR vaccine and contract BRAC to implement PPR campaign:

During April, the Ministry of Agriculture informed USAID FED that the levels of response for the 2012 PPR vaccination campaign have to be ascertained prior to conducting another PPR vaccination campaign. Blood samples from animals will have to be collected, tested and analyzed in order to determine the efficacy of previous PPR vaccinations and to determine whether the proposed campaign should be implemented as planned. The MOA stated that since the Ebola Virus Disease outbreak in 2014, there have been no restocking activities and no reported cases of PPR. Towards this, USAID FED proceeded with the procurement procedures to acquire an ELISA Plate Reader to facilitate testing and analysis of samples. It is anticipated that the ELISA Reader will be in country in June. As the rainy season is about to commence, it was agreed that the campaign be postponed to September/October 2015 when the dry season commences.

#### **Activity I.D.5 Formalizing livestock markets**

#### Task I.D.5. I Develop database of traders willing to participate in market events with farmers:

By the end of the quarter two reporting period, USAID FED had developed a database of traders in Monrovia and at the county level who are willing to participate in marketing events. This database has been further populated during the month of April (Table 40).

Table 40: Summary of traders by county.

| County      | District         | #of Traders | Male | Female |
|-------------|------------------|-------------|------|--------|
| Bong        | Jorquelleh       | 7           | 7    | 0      |
|             | Panta            | 4           | 2    | 2      |
|             | Suakoko          | 3           | 2    | I      |
|             | Yellequelleh     | 4           | 2    | 2      |
| Nimba       | Sanniquelleh Mah | 8           | 3    | 5      |
|             | Tappita          | 4           | 3    | I      |
|             | Saclepea mah     | 4           | 2    | 2      |
|             | Zoe-Geh          | 4           | 3    | I      |
| Grand Bassa | #3               | 5           | l    | 4      |

|             | #4       | 2  |    |    |
|-------------|----------|----|----|----|
|             | #I       | 2  | 0  | 2  |
|             | #2       | 2  | I  | I  |
| Lofa        | Voinjama | 5  | I  | 4  |
|             | Kolahun  | 3  | 0  | 3  |
|             | Foya     | 4  | 2  | 2  |
|             | Zorzor   | 3  | I  | 2  |
| Montserrado | #11      | 2  | 2  | 0  |
|             | #6       | 5  | 5  | 0  |
| Total       |          | 71 | 38 | 33 |

#### Task 1.D.5.3 Train goat farmers on selection of animals for sale and fattening techniques:

During April, USAID FED contracted a Trader Independent Consultant (IC) who will train goat farmers on how to select and fatten animals for sale. The Trader IC will commence his assignment during the second week of May.

#### Task 1.D.5.4 Identify location venues for goat marketing events at county and cluster level:

Locations for the marketing events have been identified ahead of the marketing events on the basis of buck population in herds. Local and urban traders will be provided with information on the number of animals available for sale and invited to participate in the trader market events in May (Table 41).

Table 41: Locations and animal statistics.

| County      | Event location | Number of<br>bucks<br>currently<br>available | Planned date |
|-------------|----------------|----------------------------------------------|--------------|
| Bong        | Melekie        | 40                                           | May 22,2015  |
| Nimba       | Ganta          | 50                                           | May 26,2015  |
| Lofa        | Voinjama       | 80                                           | May 29,2015  |
| Grand Bassa | Gia Town       | 32                                           | May 28,2015  |
| Total       |                | 202                                          |              |

# Task I.D.5.6 Facilitate one marketing event every month in each county:

During the month of April, USAID FED held a follow up meeting with the National Livestock Union of Liberia to discuss their participation in the planned marketing event scheduled for May 22 in Bong County. The traders indicated that they aim to buy at least 100 goats during each marketing event. The Trader IC will assist goat farmers in selecting an adequate number of marketable animals for the scheduled events.

### Activity 1.D.6 Improving nutrition for higher livestock value



Figure 13: Mr. Turker (Left) identifies forages with James Whayou (Assistant Lead farmer) at Blaygbahn Goat site, Grand Bassa County.

# Task I.D.6.1 Develop databases for forages most suitable for Liberia

Towards developing a comprehensive database of forages and animal nutritional requirements that goat farmers can benefit from, USAID FED recruited a Forage Production Expert, Mr. Samuel Tucker, to assist

with the identification and selection of appropriate forages as well as training of farmers on which forage species are the best for herd health and fattening. Mr. Tucker commenced his assignment in March and has identified nine different species of forage to select from. These include *Brachiaria*, *Panicum maximum*, *Pennisteum purpureum*, *Leucaena*, *Stylosanthes*, *Soybean*, *Moringa*, *Centrocema* and *Kudzu*. Among the nine forage species identified, Mr. Turker has recommended 3 species suitable for cultivation based on the nutritional level, ease of propagation, fast growth and PERSUAP compliance (Table 42).

Table 42: Forages recommended.

| No. | Name of forage Recommended                 | Nutritional level | Method of Propagation |
|-----|--------------------------------------------|-------------------|-----------------------|
| Ι.  | Pennisteum purpureum/Elephant/Napier grass | 12-24% protein    | Cuttings              |
| 2.  | Centrocema                                 | 18-19% protein    | Seeds                 |
| 3.  | Moringa /Radish tree                       | Vitamins C,B,K    | Seed& Cuttings        |

#### Sub Task I.I Special Studies and MoA Data Collection System Development

USAID FED has commenced interviews with suitable candidates, both national and international, who will immediately fill this STTA gap for the special studies advisor. While this is ongoing, the M&E team has begun to develop sampling frameworks and questionnaires to carry out three special studies and surveys, namely:

- I. Post-harvest losses in rice and vegetables without USAID FED intervention and with USAID FED intervention.
- 2. Average Household Diet Diversity Score.
- 3. Impact of USAID FED supported shelters in goat production & Optimal goat shelter size, materials and cost.

These surveys are expected to commence in May 2015 and will be conducted by FED Staff, USAID LNGOs and enumerators.

# Activity 1.1.3.1 Equipment and Materials Procured for the MOA Offices in Nimba, Lofa and Grand Bassa Counties

#### Task 1.1.3.1.4 Disposal of equipment to respective MoA County Offices

To date, NXP requests for additional materials and equipment that would support the MoA with their M&E systems in Lofa, Nimba and Grand Bassa counties have been forwarded to USAID for review and approval.

#### Activity 1.1.4.2 Piloting quality assurance of the database system design

#### Task 1.1.4.2.1 Training materials, manual and modules approbation

A Data Management and Reporting manual has been developed containing four modules that will be used during the training of MoA staff in Gbarnga, Bong County. The manual will serve as a reference guide for the extension officers who will participate in the upcoming training in May, 2015.

# Task 1.1.4.2.2 Assisting FED and MOA staff in the installation and utilization of the online database and tools

To date, the online database is undergoing development and there has been a series of meetings held between FED and HAK Technologies to ensure that the system design will meet project needs. In May, HAK Technologies will present a draft of the online data base to FED.

#### **Activity 1.1.6.2 Outgrowers Expansion Assessment**

#### Task 1.1.6.1.1 Assist for the preparation and approval of concept notes to conduct study

The M&E team has realigned most of the special studies realizing that some studies are primarily a component of other studies. As such, the Outgrowers Expansion Assessment has been linked with another planned survey on the overall effects of USAID FED programming. This study will be conducted once the STTA is in place.

### Sub Task 1.2 Improved access to Agricultural Inputs

#### Deliverable 1.2.1 Improving access to good seeds and other planting materials

#### Activity 1.2.1.1 Establishment of commercial production and marketing of rice seeds

# Task 1.2.1.1.1 Technical assistance and business development support to 22 Rice Seed Multiplication (RSM) site operators:

During FY15 quarter two, harvesting of all 22 FY14 Rice Seed Multiplication sites was completed. Samples were collected and labelled for onward submission to CARI for analysis. In April, the West Africa Agriculture Productivity Program (WAAPP) organized a meeting at the USAID FED office in Monrovia to discuss how concerned stakeholders could proceed with the development of the seed sector in Liberia. This meeting is scheduled for the Ist of May and will include guests from World Bank, Africa Rice, the MoA, Conseil Ouest et Centre Africain Pour la Recherche et le Developpement Agricoles (CORAF) as well as FED's Component I and 2 leads.

In May, Component 2 and the Input Supply team will host a series of meetings with WAAPP and Africa Rice to move forward with the establishment of a framework for implementing ECOWAS seed regulations for Liberia. The implementing guidelines are also expected to address the issue of seed rice quality testing and analysis.

# Task 1.2.1.1.3 Identification, engagement and support of private sector firm for commercial production and marketing of rice seed:

From April 09-10, USAID FED participated in a workshop organized by Africa Rice at the Cape Hotel towards providing inputs to Africa Rice's proposed work plan for the development of the rice seed sector in Liberia. Africa Rice will be receiving funding from USAID's Bureau of Food Security to implement activities within this work plan.

During the workshop, USAID FED gave a presentation on its rice seed interventions and challenges, including finding interested private sector partners willing to invest in commercial production and marketing of rice seed. Further discussions with Africa Rice, USAID Liberia and Jennifer Harte from the Bureau of Food Security during working group sessions noted that an enabling environment, level playing field, and guaranteed demand for rice seed must prevail for the private sector to invest in commercial production and marketing of rice seed. It was also acknowledged that recent donations of large volumes of certified rice seed by foreign donors may further have a negative impact in convincing the private sector to invest in rice seed brand development.

During the meeting with Jennifer Harte, Africa Rice, and FED, it was agreed that USAID FED will contract a seed certification consultant who will prepare the implementing guidelines for the seed regulation

promulgated in August 2014. When project implementation by Africa Rice commences, FED and Africa Rice will jointly work with the MoA to get the implementing guidelines approved, and have the Rice Seed Board established. A parallel activity that will prepare facilities, such as a seed testing laboratory and seed storage, to support the implementation of the seed certification program, once legally enacted, will be carried out by FED.

# Task 1.2.1.1.6 Identification and development of 22 additional sites for rice seed production and training of new seed producers:

During April, WAAPP and Africa Rice informed USAID FED that they were willing to provide USAID FED with 20 MT of Foundation seed for both upland and lowland rice seed multiplication sites. It is anticipated that the foundation seeds will be made available to USAID FED in May. The total number of rice seed multiplication sites to be supported in FY15 will total to 315 ha in lowland areas where irrigation spillways have been constructed. The 40 ha of upland rice seed multiplication sites established in FY14 will be replanted in FY15. USAID FED has requested WAAPP to provide 12.6 MT of Lowland seed and 6.0 MT of Upland seed.

#### Task 1.2.1.1.7 Collaboration with WAAPP and WASP in developing the rice seed industry in Liberia:

During the quarter two reporting period, USAID FED provided WAAP and the MoA with a comprehensive upland and lowland rice beneficiary listing for FY13, FY14 and FY15 production clusters in order to access certified seed being brought into Liberia with World Bank financing. In March, USAID FED was informed that only upland rice seed would be available. Efforts to access 552 MT of the upland seed required for USAID FED's beneficiaries did not bear fruit by the end of quarter 2.

On April 8, FED's USAID Deputy Chief of Party was invited to a meeting at the MoA to discuss the distribution plans for available certified rice seed. USAID FED was informed to expect 100 MT of upland rice seed. However, upon follow up, WAAPP informed USAID FED that there was no allocation for USAID FED beneficiaries in the current stock. Further to these developments, USAID FED proceeded with the internal procurement of upland rice seed for FY15 beneficiaries.

During April, WAAPP and USAID FED have had increased productive contact on how best to partner in the development of the rice seed sector. This is explained in more detail under Task 1.2.1.1.1 and Tasks 1.2.1.1.6.

#### Activity 1.2.1.2 Support to commercial production and marketing of cassava cuttings

### Task 1.2.1.2.1 New improved varieties released by CARI distributed to and multiplied by 40 commercial nurseries:

During April, 40 commercial cassava nursery owners were trained by CARI and USAID FED on new varieties and rationing of cassava. The 40 nurseries have also cleared 60 ha of land ready to receive cuttings for planting. In May, the cassava value chain will develop a distribution plan for delivering cuttings to the nurseries once official release of the varieties is obtained from CARI.

#### Task 1.2.1.3.2 Disease resistant varieties introduced and demonstrated

During April, USAID FED provided two vegetable farming clusters with imported African eggplant, Bitter Ball, Cayenne Pepper and Scotch Bonnet Pepper seeds which have a higher resistance to local diseases. These seedlings were planted in April in Bulu and Mensah farming clusters in Montserrado County.

#### Deliverable 1.2.2 Improved Access to and Increased Utilization of Inputs

# Activity 1.2.2.2 Awareness campaign on benefits of agri-inputs through radio programming and other platforms

#### Task 1.2.2.2.1 Hire STTA to determine optimal packaging:

During April, the contracting documents for the selected STTA were submitted to USAID for approval. It is anticipated that the STTA will be deployed in May to commence implementation of the assignment.

### Deliverable 1.2.3 Efficient inorganic fertilizer use and organic fertilizer mix introduced and promoted

#### Activity 1.2.3.2 Demonstrate on-farm composting for vegetables:

# Task 1.2.3.2.1 Support demonstration of composting and training in composting in at least one farm in FED's vegetable clusters:

The shredder equipment for compost preparation arrived in country at the end of March. By the end of April, USAID FED was still pursuing the clearance of the equipment with customs. The demonstration of compost preparation for vegetable farms is scheduled to take place in May once the equipment has been received. From April 27 - May 01, USAID FED's Horticulture Specialist also conducted training on compost preparation for vegetable production to 25 youth Extension Aides, 5 LNGO staff and 7 FED Extension Officers in Kakata, Margibi County.

#### Activity 1.2.3.4 UDP+SRI research

### Task 1.2.3.4.1 Complete UDP+SRI research and carry out comparative analysis of cost and benefits vs. UDP only and SRI only:

During April, USAID FED continued to closely monitor the 4 UDP-SRI sites in Bong and Nimba Counties. The UDP-SRI Project Manager collected data on plant height and number of tillers per site (Tables 43-46).

Table 43: Average crop heights and number of tillers per plot at Gamue2 (8 weeks old plants).

| Plant Height (cm) per plot | Number of Tillers per plot |
|----------------------------|----------------------------|
| 120.8                      | 27                         |
| 90.4                       | 35                         |
| 110.7                      | 35                         |
| 92.0                       | 38                         |
|                            | 90.4<br>110.7              |

Table 44: Average crop heights and number of tillers per plot at Gbarngasiequelleh (8 weeks old plants)

| Treatments      | Plant Height (cm) per plot | Number of Tillers per plot |
|-----------------|----------------------------|----------------------------|
| TI UDP 20/3     | 93.5                       | 29                         |
| T2 UDP+SRI 20/I | 90.0                       | 31                         |

| T3 UDP+SRI 25/3 | 80.4 | 41 |
|-----------------|------|----|
| T4 UDP+SRI 25/I | 92.0 | 45 |

Table 45: Average crop heights and number of tillers per plot at Gausi sites (6 weeks old plants).

| Treatments      | Plant Height (cm) per plot | Number of Tillers per plot |  |
|-----------------|----------------------------|----------------------------|--|
| T1 UDP 20/3     | 83.2                       | 32                         |  |
| T2 UDP+SRI 20/I | 62.1                       | 25                         |  |
| T3 UDP+SRI 25/3 | 64.2                       | 32                         |  |
| T4 UDP+SRI 25/I | 61.5                       | 21                         |  |

Table 46: Average crop heights and number of tillers per plot at Karmei (7 weeks old plants).

| Treatments      | Plant Height (cm) per plot | Number of Tillers per plot |  |
|-----------------|----------------------------|----------------------------|--|
| T1 UDP 20/3     | 78.6                       | 18                         |  |
| T2 UDP+SRI 20/I | 78.1                       | 18                         |  |
| T3 UDP+SRI 25/3 | 83.2                       | 28                         |  |
| T4 UDP+SRI 25/I | 82.3                       | 19                         |  |

Observations from the tables above reveal that the numbers of tillers in treatments with one plant per hill were significantly higher (74%) than in treatments with two and three plants per hill. Some plots are reported to have 45 tillers per plant. It is also observed that spacing has an effect on tillers as well. Tillers in treatments with spacing of 25cm  $\times$  25cm with one plant per hill are 53% higher than those with spacing of 20cm  $\times$  20cm with one plant per hill.

### **Sub Task 1.3: Agricultural Extension Support**

Activity I.3.1 Development of de-concentration and decentralization strategies with MOA

Task 1.3.1.2 Workshop facilitated in collaboration with MOA, ADCCs and agriculture stakeholders towards validation of newly drafted deconcentration and decentralization strategy:



Figure 14: USAID FED's CBF Emmanuel Zeh, taking measurements of tillers at Gausi UDP-SRI Site in Nimba County

During the month of January, a Technical Agriculture Core Team (TACT) was established in collaboration with the Ministry of Agriculture to review and validate extension materials developed as part of the deconcentration and decentralization strategy. USAID FED will be presenting in May 2015 a diagram to illustrate its proposed de-concentration and decentralization strategy to the TACT.

#### Activity 1.3.2 Development of standardized agricultural extension curricula

#### Task 1.3.2.3 Working group established in collaboration with MoA, formal and informal educational institutions to standardize extension curricula material and courses:

During April, USAID FED developed extension curricula for rice, cassava and horticulture. These were presented to key stakeholders who were invited at the USAID FED offices for review and validation. On the morning of April 22, the rice curriculum validation workshop was conducted. A total of 23 participants from different institutions working in the rice sector participated in the validation exercise. This included the Ministry of Agriculture's Deputy Minister for Technical Services Dr. Sizi Subah and the Assistant Minister for Extension Services, Mr. Paul Jallah (Table 47).

Table 47: Rice curriculum validation participants

| No. | Name of Organization                                         | Number of<br>Participants | Male | Female |
|-----|--------------------------------------------------------------|---------------------------|------|--------|
| I   | MoA                                                          | 2                         | 2    | 0      |
| 2   | Community of Hope Agriculture Project CHAP                   | 3                         | 3    | 0      |
| 3   | Lofa County Community College                                | 2                         | 2    | 0      |
| 4   | University of Liberia                                        | I                         | I    | 0      |
| 5   | Cuttington University                                        | I                         | I    | 0      |
| 6   | USAID FED                                                    | 6                         | 5    | ı      |
| 7   | BRAC                                                         | I                         | I    | 0      |
| 8   | World Food Program                                           | I                         | I    | 0      |
| 9   | Wienco Agriculture                                           | I                         | I    | 0      |
| 9   | BWI                                                          | I                         | I    | 0      |
| 10  | USAID/Liberia                                                | I                         | I    | 0      |
| П   | WAAPP Liberia                                                | I                         | I    | 0      |
| 12  | Agricultural Infrastructure Investment Corporation (A.I.I.C) | I                         | I    | 0      |
| 13  | Zellie Farmers Association                                   | I                         | I    | 0      |
|     |                                                              | 23                        | 22   | I      |

During the workshop, II chapters of the rice curricula were reviewed. It was suggested by the MoA Assistant Minister for Extension Paul Jallah that a new chapter be included on "Site Selection" since the type of land selected ultimately determines land preparation methods. This suggestion was agreed to by all stakeholders. A new chapter on "Site Selection" has since been added to the curriculum and all other suggestions and validation recommendations emerging from the were incorporated into the curriculum.

The cassava curriculum validation workshop was conducted in Figure 15: Dr. Sizi Subah, MOA's Deputy Minister the afternoon of April 22, 2015. A total of 18 participants from different institutions participated in the validation exercise validation workshop (Table 48). The draft curriculum was jointly developed and presented to stakeholders by FED and ZOA.



for Technical Services at the Rice curriculum

Table 48: Cassava curriculum validation participants

| No. | Name of Organization                                         | Number of<br>Participants | Male | Female |
|-----|--------------------------------------------------------------|---------------------------|------|--------|
| ı   | Larda Inc.                                                   | 2                         | 2    | 0      |
| 2   | Congba Farms                                                 | I                         |      | 0      |
| 3   | Afrivision Int.                                              | I                         |      | 0      |
| 4   | National Cassava Sector<br>Coordinating Committee<br>(NCSCC) | 2                         | 2    | 0      |
| 5   | BWI                                                          | I                         |      | 0      |
| 6   | Liberia Business Incubator                                   | ı                         | 0    | I      |
| 7   | WAAPP Liberia                                                | I                         |      | 0      |
| 8   | FALAMA                                                       | I                         |      | 0      |
| 9   | USAID FED                                                    | 6                         | 5    | I      |
| 10  | Limave Inc.                                                  | I                         |      | 0      |
| П   | Daughters of Nimba                                           | I                         | 0    | I      |
| 12  | ZOA                                                          | I                         | I    | 0      |
|     |                                                              | 19                        | 16   | 3      |

During the validation, 11 chapters of the curriculum were reviewed and accepted with minor technical edits and recommendations for addition.

On April 23, the horticulture curriculum validation workshop was conducted. A total of 19 participants from different institutions participated in the validation exercise (Table 49). MoA Extension Director Edward Perry and the MoA Plant Pathologist Mr. Oliver B. Teekpeh represented the Ministry of Agriculture.

Table 49: Horticulture curriculum validation participants

| No. | Name of Organization                                  | Number of<br>Participants | Male | Female |
|-----|-------------------------------------------------------|---------------------------|------|--------|
| ١.  | CARE Liberia                                          | I                         | I    | 0      |
| 2.  | BWI                                                   | 1                         | 1    | 0      |
| 3.  | Welte Hunger Helife<br>(WHH)/ (German Agro<br>Action) | 4                         | 4    | 0      |
| 4.  | WAAPP Liberia                                         | I                         | 1    | 0      |
| 5.  | USAID/Liberia                                         | 2                         | 2    | 0      |
| 6.  | USAID FED                                             | 5                         | 5    | 0      |
| 7.  | ACF                                                   | 1                         | I    | 0      |
| 8.  | MoA                                                   | 2                         | 2    | 0      |
| 9.  | ZOA                                                   | I                         | I    | 0      |
| 10. | AIIC                                                  | 1                         | I    | 0      |
|     |                                                       | 19                        | 19   | 0      |

During the validation, it was suggested that a separate chapter be included on "Marketing." This chapter has since been incorporated into the curriculum, bringing the total number of chapters to 11. The curriculum was accepted by all stakeholders with minor edits for addition. The chapter on seed selection attracted the most comments possibly due to the importance of proper seed selection in the establishment of any vegetable production program.

#### Activity 1.3.3 Development of extension material and information access points

# Task I.3.3.1 Extension material and packages covering technical aspects of production techniques, production planning, integrated pest and disease management, variety selection and post-harvest handling developed for rice, cassava, goats and horticulture value chains:

During April, the Extension Support team assisted the Nutrition Officer with producing the nutrition flyer that will complement the nutrition poster. The nutrition flyer was approved by the MoA for further dissemination to beneficiaries. This is reported under the nutrition section of the report.

The extension team also captured video content on compost preparation at Mensah Farm in Mount Barclay where the vegetable cluster lead farmers and USAID FED extension officers were receiving training from FED's Horticulture Specialist, as well as footage from the Fabrar Liberia Inc. rice processing facility launch, which will be used for the production of a short video documentary on developing industrial rice processing in Liberia.

# Task 1.3.3.5 Agricultural radio program content for monthly radio shows produced in collaboration with communications unit and five community radio stations:

During April, USAID FED's Extension Support unit held discussions with MoA's Communication Director Ms. Getrude F. Deshield on how to progress with the airing of FED's "On the farm" radio program. The MoA is proposing that both parties pay half the cost of broadcast time on ELBC radio. MoA is currently paying USD \$450 for an hour long production per week with ELBC. It is anticipated that discussions will be concluded in May on how to proceed with this proposed partnership.

# Task 1.3.3.6 Agricultural radio shows aired once weekly by five radio stations in Bong, Nimba, Lofa, Grand Bassa and Montserrado counties:

During April, eight radio programs were produced and aired on radio Super Bongese in Bong County and Tamba Taikor in Foya, Lofa County. The following shows were aired: Super Bongese- Bong: I) Rice post-harvest management, 2) vegetable site selection, 3) cassava stem production and storage, 4) goat head management. Tamba Taikor- Lofa: I) Rice field clearing, 2) nursery bed preparation for rice production, 3) different plowing methods for rice production, 4) construction of bands, canals and head dykes for lowland rice production

### Sub Task 1.4: Youth in Agribusiness

#### FY14 Back to School Garden Programs

In FY15, USAID FED will not be implementing a back to school garden programs. After meetings between the USAID Advancing Youth Project (AYP) and USAID FED management during the quarter two reporting period, it was agreed that AYP would provide USAID FED with a final report of the project assessment. This assessment would determine the overall impact of the project and sustainability beyond USAID FED, AYP and UNICEF assistance. To date, AYP is yet to share a final project report with USAID FED. Production and sales information from the schools were not recorded during April. Based on USAID FED's FY14 experience, the back to school garden programs were beneficial in terms of increasing the participation of students in agricultural production, as well as enhancing their knowledge of agriculture and agricultural technologies. However, the sustainability of the schools to manage the gardens and sustain production without assistance from donors may be difficult.

#### Activity 1.4.1 Establishment of agribusiness horticulture pilots

#### Task 1.4.1.2 Establish income and baselines for the identified clusters inputs cost:

During April, Green Coast Agriculture Program (G-CAP), the LNGO contracted by USAID FED to provide technical assistance to the 500 youth under the 25 youth agribusiness pilots, collected baseline survey data from all the 25 clusters. The baseline information includes land size under cultivation, production and sales prior to USAID FED assistance. The data will be analyzed by USAID FED's M&E unit and a complete analysis made available in May.

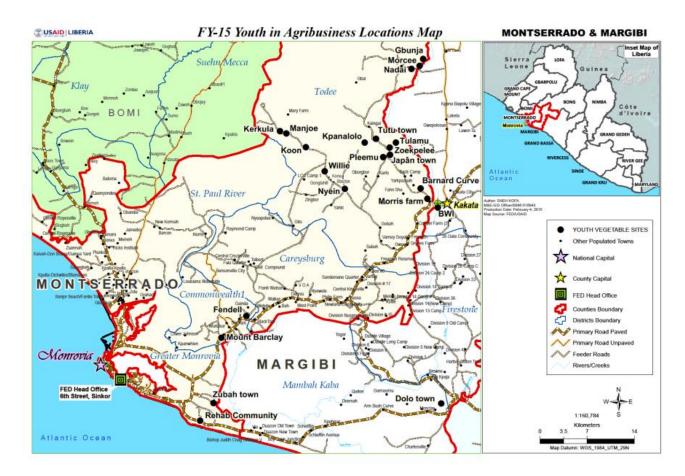


Figure 16: Youth in Agribusiness Pilots locations.

### Task 1.4.1.3 Establish 25 demonstration plots of 0.25 ha each:

During April, all the 25 youth farming groups received a total of 20 kg of okra, cabbage, cucumber and African eggplant seeds valued at USD \$3,767. All the seeds have been planted in nurseries for future planting.

Table 50: Varieties of seeds distributed to USAID FED-supported youth groups

| Seed variety  | Qty (Grams) | Number of Clusters |  |
|---------------|-------------|--------------------|--|
| Montserrado   |             |                    |  |
| Watermelons   | 950         | 18                 |  |
| Chilli Pepper | 7,475       | 23                 |  |
| Bitter ball   | 2,990       | 23                 |  |
| Cabbage       | 1,725       | 23                 |  |
| Cucumber      | 1,840       | 23                 |  |
| Okra          | 3,650       | 23                 |  |
| TOTAL         | 18,630      |                    |  |
| Margibi       |             |                    |  |
| Chilli Pepper | 650         | 2                  |  |
| Bitter ball   | 260         | 2                  |  |
| Cabbage       | 150         | 2                  |  |
| Cucumber      | 160         | 2                  |  |
| Okra          | 100         | 2                  |  |
| TOTAL         | 1,320       |                    |  |

# Task 1.4.1.4 Link youth vegetable clusters to local and high value markets:

During April, two youth groups, Morris Farm Agriculture Association Project and See Yourself Agriculture Youth Group, in Montserrado County entered into agreements with Grain Coast Inc. (GCI) towards the production of okra as out growers. The 2 youth groups have committed 3 ha of land for this purpose. It is anticipated that the 2 youth groups will supply their first batch of Okra to GCI in July.



Figure 17:Fendell Young farmers' association members from Montserrado County receiving seeds from USAID

#### Activity 1.4.2 Supporting job creation through youth extension aides

### Task 1.4.2.2 Training and equipping youth extension aids with appropriate extension materials:

During April, USAID FED's GIS Officer trained 25 youth extension aides on how to use GPS equipment to measure farmer fields. It is anticipated that G-CAP will employ these youth extension aides on the

recommendation from USAID FED to assist with GPS mapping of the land under cultivation in the 25 clusters.

From April 27 to May 01, USAID FED's Horticulture Specialist provided training to the 25 youth extension aides (17 men and 8 women) and five LNGO extension staff (5 men and 0 women) on Good Agricultural Practices (GAP) and Integrated Pest Management (IPM) for vegetable production. The training was conducted in Kakata, Margibi County. The participants were trained on how to identify, control and manage pests and diseases which affects aubergines, African eggplant, chili pepper, watermelon, cucumber, cabbage and lettuce. The participants



Figure 18: Youth extension aides with a compost heap they developed during training.

were also trained on how to develop compost using locally available biomass material.

# Activity 1.4.3 Supporting job creation through youth enterprises as transport service providers

#### Task: 1.4.3.1 Identify and recruit 49 youth towards establishment of transport businesses:

During the quarter 2 reporting period, USAID FED identified 49 potential youth entrepreneurs to cost-share agreements on establishing transport service businesses using *Tuk-Tuk* motorbikes. The transport services would ensure that rice and cassava farmers have access to affordable transport services within their clusters, through which they can aggregate their produce for Rice Business Hubs and Cassava micro-processors. Each of the entrepreneurs would invest 50 percent of the value of the *Tuk-Tuk* motorbikes, which are valued at USD \$3,000 per unit. During April, USAID FED ascertained during the verification process of the identified entrepreneurs that they have no capacity or proof that they are in a position to guarantee their expected cost share obligations.

On April I, USAID FED's Component 2 held a one day workshop at the USAID FED Monrovia office with five Business Service Providers (BSP's) contracted by USAID FED to provide business development services to rural SMEs. The objective of the workshop was to assist the BSPs in understanding USAID FED's interventions within the value chains and the nature of enterprises being supported. During this workshop, it was agreed that USAID FED would solicit interest from a new set of entrepreneurs identified through USAID FED's County offices, on the criteria that identified entrepreneurs would be willing to cost share with possible loan assistance from LEAD. A new list of verified entrepreneurs will be submitted by the Counties in May. Component 2 will provide technical assistance to these new entrepreneurs to ensure that their businesses are registered and that they have viable business plans.

### Activity 1.4.4 Supporting job creation through youth enterprises as power tiller service providers

# Task 1.4.4.1 Identify and recruit 20 youth towards establishment of power tiller businesses to support lowland rice farmers in land preparation:

During the quarter two reporting period, USAID FED identified 20 youth entrepreneurs to cost share on establishing enterprises that provide mechanized services through power tillers. Each of the entrepreneurs would invest 50 percent of the value of the power tillers, which are valued at USD \$4,800 per unit The 20 identified entrepreneurs would each till 48 ha of USAID FED supported lowland demonstration sites as part of their USD \$2,400 cost-share obligation. The 20 entrepreneurs will provide for the maintenance costs of

the power tillers, before the asset disposition has been concluded. During April, Gro Green, the contracted supplier informed USAID FED that the power tillers had arrived in the country. These power tillers will be distributed to the 20 entrepreneurs before the end of May.

#### Activity 1.4.5 Supporting job creation through training youth as machine operators

#### Task: 1.4.5.1 Identify and train 58 youth towards operation of cassava processing equipment:

During the quarter I reporting period, USAID FED identified 58 youth in Bong, Nimba, Lofa, Grand Bassa and Montserrado Counties to be trained as machine operators on cassava processing equipment. During April, USAID FED's Senior Agro Technician began developing training manuals on how to operate cassava processing equipment. These manuals will be provided to the extension unit for quality assurance and proper packaging in May. The training of the 58 youth is also scheduled to take place in May. It is anticipated that some of the small and micro cassava processors will hire some of the trained youth as machine operators in their businesses.

#### Task: 1.4.5.2: Identify and train 40 youth towards operation of rice milling equipment:

During the quarter I reporting period, USAID FED identified 40 youth in Bong, Nimba, Lofa, Grand Bassa and Montserrado Counties to be trained as machine operators of rice milling equipment. During April, USAID FED's Senior Agro Technician began developing training manuals on how to operate rice milling equipment. These manuals will be provided to the extension unit for quality assurance and proper packaging in May. The training of the 58 youth is also scheduled to take place in May. It is anticipated that some of the rice business hubs and Fabrar Liberia Inc. may hire some of the trained youth as machine operators in their businesses.

#### Activity 1.4.7 Facilitating access to financial services for youth enterprises

#### Task 1.4.7.1 Conduct assessment of financing needs and requirements for youth enterprises:

During April, USAID FED completed the financial needs assessment of 62 youth enterprises with the assistance of Component 2. This included a total of 30 enterprises that will provide mechanized services through power tillers, 16 carpentry enterprises, and 16 blacksmith enterprises. The profiling of transport enterprises will be completed in May. FED will assist these enterprises with developing business plans and link them to financial services providers such as LEAD.

#### **Sub Task 1.5: Improving Human Nutrition**

#### Activity 1.5.1 Development of Diet Behavior-Change Communications (DBCC) Strategy

#### Task 1.5.1.1 Hiring of Behavior Change Communication Specialist:

During April, Ms. Alison Gardner, a nutrition specialist with previous experience in Liberia was interviewed and successfully selected for the position of Behavior Change Communication Specialist. Ms. Gardner previously conducted nutrition assessments, gap analyses and developed programmatic recommendations for USAID Liberia during 2013. She has also worked closely with Liberia's Ministry of Health & Social Welfare (MoHSW) on nutrition issues in the past. All the contracting requests have been submitted to USAID for their approval. Upon her deployment to Liberia, implementation of Tasks 1.5.1.2 to Task 1.5.1.3 will commence sequentially.

#### Activity 1.5.2 DBCC Strategy implemented and monitored

#### Task 1.5.2.1 Community materials printed and multiplied for dissemination:

It is anticipated that implementation of Activity I.5.I will subsequently result in the development of appropriately targeted nutrition messages on diet behavior change for further dissemination to USAID FED beneficiaries.

On April 10, USAID FED held a meeting with Ms. Jennifer Harte, Senior Foods Systems Adviser for USAID's Bureau of Food Security to explore possibilities on how AVRDC-The World Vegetable Centre could leverage USAID FED's outreach and infrastructure as a Feed the Future flagship project in order to roll out its proposed *Deploying Vegetable Seed Kits to Tackle Malnutrition in Liberia* Project. The goal of AVRDC's project is to contribute to reduced malnutrition, especially of children, through diet diversification, by promoting the production and consumption of vegetables as affordable sources of essential vitamins and micronutrients. The project intends to achieve this by promoting

the accelerated production and deployment of diet-enhancing vegetable seed kits with a target reach of 10,000 households in Liberia. It was agreed that consultations between AVRDC and USAID FED

management will be concluded in May to determine the modalities that will result in a mutually beneficial d partnership.

### Activity 1.5.3 Nutrition messaging outreach to more households

Task 1.5.3.1 Revise existing materials, develop posters, flyers and radio messages conveying nutrition messaging with specific focus on behavior change targeting diet diversification within HH general and for pregnant women and children under two years:

During April, USAID FED received approval from the Ministry of Agriculture to commence dissemination of the Nutrition poster that was approved by the Ministry of Health & Social Welfare in March. FED also developed a flyer on recommended food groups and which was also approved by the Ministry of Agriculture. In May, printing of 2,000 copies will be completed and dissemination to FED beneficiaries will commence. Additionally, 6,000 copies of the flyer approved will be printed and disseminated to participants to all trainings organized and sponsored by USAID FED, and will also be distributed to non-FED farmers through the MoA County Agriculture Coordinators (CACs) in the six counties of USAID FED intervention.

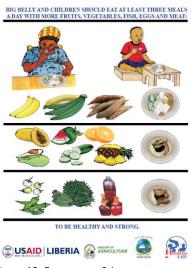


Figure 19: Front page of the nutrition poster and flyer approved by MoA and MoHSW.



Figure 20: Back page of the nutrition poster and flyer approved by MoA and MoHSW.

Task 1.5.3.2 Disseminate material to direct beneficiaries through field extension staff and LNGOs:

On April 30, USAID FED's Nutrition Officer disseminated nutrition messaging to 25 youth extension aides (17 men and 8 women) and 5 LNGO staff (5 men and 0 women) during a youth extension aide training held in Kakata, Margibi County. These youth extension aides are expected to provide extension services to 500 youth under the Youth in Agribusiness pilots in Montserrado and Margibi Counties.

### Component Two: Stimulate Private Sector Growth and Investment

### Task 2: Policy Enabling Environment for Private Sector Growth

### **Activity 2.1.1 Policy Reform Activities via Technical Working Groups**

#### Task 2.1.1.1 LABEE Technical Working Group

The Minister of Commerce and Industry (MoCI) organized a second planning meeting for the third annual Micro, Small and Medium Enterprise (MSME) Conference to take place in November 2015. USAID FED participated in the 2014 MSME conference. The major theme for 2015 will be youth (defined as 18 to 40 years old) entrepreneurship. USAID FED will serve on the Policy and Agenda Committee. This committee will finalize the agenda, identify all speakers, and moderators, and send and confirm invitations. The committee will also identify policies key to access to finance and markets and work with MoCI and relevant ministries to ensure announcements at the conference. The Minister will have an organizing meeting each month and committees will meet twice a month during the year.

The LABEE Technical Working Group will meet in May to discuss the MSME conference and follow up on recommendations from the February policy forum.

#### Task 2.1.1.2 Seed, Pesticide, and Fertilizer Technical Working Group

By publishing ECOWAS Regulations in the country's National Gazette, the Government of Liberia activated national seed, fertilizer, and pesticide regulations in September 2014. The purpose of the Seed Regulation is to harmonize the rules governing quality control, certification, and marketing of seed and seedlings in the ECOWAS Member States. The regulations took effect immediately. As of April 2015, the GoL has implemented only 33% of the steps needed to activate the seed regulations. USAID FED prepared a draft scope of work to engage an international seed industry development expert starting in May to assist the GoL towards implementation of the ECOWAS seed regulation.

During May and June separate policy forums will be held for each of the inputs -- Seed, Pesticide and Fertilizer-- to determine status of implementation of ECOWAS regulations by the GoL and challenges for both the private and public sectors. However, the MoA places priority on the implementation of the ECOWAS seed regulation.

### Activity 2.1.2 Assessment of Training Needs and Training for Relevant Government Agencies and Private Sector

Discussions have started with the Ministry of Commerce and Industry (MoCI) in order to prepare a draft scope of work to recruit an international consultant with expertise in assessing and building capacity to improve organizational development policies and strategic planning in the MoCI including the Department of Small Business Administration (DSBA) which will be officially launched on July 1, 2015.

#### Task 2.1.2.1 Recruit Consultant for Assessment and Capacity Building Plan

The scope of work has not yet been finalized for the consultant for the assessment and capacity building plan of MoCl and DSBA. The MoCl wishes to provide information on its needs and to comment on the SOW when prepared.

#### **Activity 2.1.4 National Standards Laboratory**

On April 28, 2015, USAID FED visited the National Standards Laboratory. During the visit, the NSL team reviewed and approved the draft scope of work prepared for a consultant to conduct a gap assessment, market study, and business plan for a self-sustaining and functioning institution. The assessment will include recommendations for the way forward on legal status, operations and management based on international best standard practices including capital and operational investments to be made in order to reach accreditation. Recruitment of the consultant will be completed in May 2015.

#### Task 2.1.4.1 Recruit Consultant for Market Study, Business Plan, Road Map

The draft scope of work was approved by the Ministry of Commerce and Industry and the National Standards Laboratory in April. Recruitment for the consultant will begin in May.

### Activity 2.2.1 Village Savings and Loan Expansion

#### Task 2.2.1.8 Application to NAPEX and CBL for Loans

Six VSLA groups have registered with NAPEX and received certificates. The six new groups have also opened accounts with Afriland first Bank of Liberia. Five of the six groups have benefited from CBL loans of USD \$15,000 to be paid back in a three-year period with an interest of 3% added.

#### Task 2.2.1.8 Monitoring and reporting on All USAID FED-sponsored VSLA Groups

Table 51: Summary of VSLA Data Old & New Groups

| County      | Active<br>member | Shares<br>purchased | Number ofpersons  | Total<br>loans      | Total<br>loans   |             |            | Sales (US\$) |            |                 | Jobs creat             | ed                          |             |
|-------------|------------------|---------------------|-------------------|---------------------|------------------|-------------|------------|--------------|------------|-----------------|------------------------|-----------------------------|-------------|
|             |                  | (US\$)              | receiving<br>loan | disbursed<br>(US\$) | repaid<br>(US\$) | Rice        | Cassava    | Vegetable    | Goats      | Total           | Number<br>of<br>people | Number<br>of days<br>worked | Manda<br>ys |
| Nimba       | 1,875            | \$9,646.12          | 76                | \$6,576.18          | \$6,534.24       | \$3,955.29  | \$2,352.94 | \$705.88     | \$726.35   | \$7,740.47      | 23                     | 9                           | 207         |
| Lofa        | 1,747            | \$11,806.47         | 81                | \$8,510.59          | \$7,698.06       | \$4,244.71  | \$0.00     | \$0.00       | \$657.18   | \$4,901.88      | 43                     | 7                           | 301         |
| Bong        | 1,695            | \$6,532.35          | 6                 | \$329.41            | \$0.00           | \$3,811.76  | \$0.00     | \$1,152.94   | \$0.00     | \$4,964.71      | 8                      | 3                           | 24          |
| Bassa       | 1,305            | \$5,350.12          | 36                | \$1,335.29          | \$32.94          | \$0.00      | \$3,435.29 | \$0.00       | \$1,192.94 | \$4,628.24      | 32                     | 6                           | 192         |
| Margibi     | 743              | \$4,782.00          | 27                | \$1,570.59          | \$41.18          | \$0.00      | \$0.00     | \$1,411.76   | \$0.00     | \$1,411.76      | 22                     | 6                           | 132         |
| Montserrado | 720              | \$3,838.00          | -                 | \$0.00              | \$5,176.47       | \$0.00      | \$0.00     | \$1,388.24   | \$0.00     | \$1,388.24      | 7                      | 6                           | 42          |
| Total       | 8,085            | \$41,955.06         | 226               | \$18,322.0<br>6     | \$19,482.88      | \$12,011.76 | \$5,788.24 | \$4,658.82   | \$2,576.47 | \$25,035.2<br>9 | 135                    | 37                          | 4995        |

As of April, the Daoplay women VSLA is the group with the highest savings and loan pool capital among the 373 VSLA groups supported by USAID FED. The group had their first cycle graduation program on the 25th of April 2015 held in Loguatuo Town, Nimba County. Madam Josephine Nigba, National President of NAPEX and James Mulbah, Senior Access to Finance Officer formed part of the graduation program.



Table 52: Description of Daoplay VSLA.

| # | Description                            | Qty./Amount  |  |  |
|---|----------------------------------------|--------------|--|--|
| I | Membership                             | 30 women     |  |  |
| 2 | Total shares purchased value           | USD \$11,490 |  |  |
| 3 | Total interest acuminated value        | USD \$4,230  |  |  |
| 4 | Total social funds value               | USD \$513    |  |  |
| 5 | Total cash disbursed to the 30 members | USD \$15,720 |  |  |

#### **Activity 2.2.3 Extension of Micro Finance to Farmers and Entrepreneurs**

### Zeelie Farmers Association:

During the reporting period, Zeelie Farmers Association purchased and sold 3,000 50kg bags to MoA with a sales value of USD \$60,000. 60% of the rice was purchased from USAID FED supported farmers, while 40% was purchased from non-USAID FED farmers in Lofa. Zeelie Farmers Association obtained a USD\$10,000 loan from LEAD Microfinance Institution through the facilitation of USAID FED, which it used as capital for buying and trading rice.

#### Task 2.2.3.3 Recruitment of Farming Groups / MSMEs for Loans

LEAD has conducted due-diligence checks on 30 USAID FED farming groups in Bong, Grand Bassa and Margibi Counties to finalize loans with farmers to make payments in May.

Table 53: Farming groups with loans by County.

| No.   | County      | No. of organizations |
|-------|-------------|----------------------|
| I     | Bong        | 14                   |
| 2     | Grand Bassa | П                    |
| 3     | Margibi     | 5                    |
| Total |             | 30                   |

#### Activity 2.2.4 Business Training and Mentorship to Access Finance

#### Task 2.3.1.2 Hire Business Service Providers to Deliver Business Development Services

In order to properly equip the five pre-selected LNGOs (Liberia Initiatives for Development Services, Jacob F. Tomei Enterprise Center, LEAD, INC., Community Youth Network Program and Top consulting) to achieve the goal for which they will be engaged by USAID FED, a workshop was initiated by the USAID FED Business Development Service team and the COP. The purpose of the workshop was to allow each USAID FED technical Lead along the four value chains to explain his/her activities, as well as to enable the

pre-selected LNGOs to have a clear understanding of USAID FED's beneficiaries businesses. The workshop was held on April I, 2015 at USAID FED's Montserrado conference room in Monrovia office. USAID FED received all I0 pre-selected LNGOS Management staff and USAID FED was represented by I3 technical staff from Components I and 2 including the COP and Twenty-three people participated in the workshop.

Table 54: BSP & FED's Technical Staffs workshop Breakdown.

| Name of BSP Management Team and USAID FED's Technical Team | Responsible Counties | Participants |        |       |
|------------------------------------------------------------|----------------------|--------------|--------|-------|
|                                                            |                      | Male         | Female | Total |
| LEAD                                                       | Nimba                | 2            |        | 2     |
| LIDS                                                       | Bong                 | 2            |        | 2     |
| Community Youth Network Program                            | Grand Bassa          | I            | I      | 2     |
| Jacob F. Tomei Enterprise Center                           | Lofa                 | 2            |        | 2     |
| Top Consulting Inc.                                        | Montserrado/Margibi  | 2            |        | 2     |
| FED Technical Team from C-1&2                              | Montserrado          | 10           | 3      | 13    |
| Total                                                      |                      | 19           | 4      | 23    |

From April 6 to 8, 2015, the USAID FED Business Development Services Team conducted a two-day workshop with cassava nurseries farmers and cassava processors in Grand Bassa County in Buchanan City. The USAID FED supported LNGO Community Youth Network Program participated in this workshop.

The purpose of the workshop was to help the cassava nursery farmers and cassava processors understand how to operate their businesses in a profitable manner, and for the pre-selected LNGO management teams to also understand how USAID FED's beneficiaries operate their businesses, to facilitate the development of the beneficiaries business plans.



Figure 22: USAID FED COP delivering BSP training in Monrovia. Liberia.

A total of 18 participants attended the workshop: participants from Compound 1, Compound 2, and Compound 3 in Grand Bassa, 2 representatives of the Community Youth Network Project (CYNP), and 2 FED cassava extension Officers attended the workshop.

Table 55: Cassava nurseries operators, processors and farmers, BSP & FED Extension agent workshop participants

| Name of BSP Management Team and USAID FED's Technical Team | Responsible Counties | Participants | ts     | Total |
|------------------------------------------------------------|----------------------|--------------|--------|-------|
|                                                            |                      | Male         | Female |       |
| Cassava Processors, Nurseries operators and farmers        | Bassa                | 13           | I      | 14    |

| CYNP representative            | Bassa | I  | I | 2  |
|--------------------------------|-------|----|---|----|
| FED Cassava Extension officers | Bassa | 2  | 0 | 2  |
| Total                          |       | 16 | 2 | 18 |

USAID FED Business Development Services Team conducted a two-day Rice Hubs Business Planning workshop from April 15 to April 16, 2015 in Voinjama City, Lofa County. The participants included nine members of three USAID/FED supported Rice Business Hubs, a private rice mill owner, three staff from the Jacob F. Tomei Enterprise Center, the selected Business Service Provider (BSP) for Lofa County and USAID/FED extension Officer.



Figure 23: USAID FED and Rice Business Hub training participants in Voinjama City, Lofa County.

Table 56: Rice Business Hubs managements and, BSP & FED Extension agent workshop participants.

| Name of BSP Management Team and USAID FED's Technical Team | Responsible Counties | Participants |        | Total |
|------------------------------------------------------------|----------------------|--------------|--------|-------|
|                                                            |                      | Male         | Female |       |
| Voinjama Rice Business Hub                                 | Lofa                 | 3            |        | 3     |
| David Simon Town Rice Business Hub                         | Lofa                 | 3            |        | 3     |
| Foyah Rice Business Hub                                    | Lofa                 | 3            | I      | 4     |
| Individual Rice Business Hub                               | Lofa                 | I            |        | I     |
| Jacob F. Tomei Enterprise Center                           | Lofa                 | 3            |        | 3     |
| FED Extension Officer                                      | Lofa                 | I            |        | I     |
| Total                                                      |                      | 14           | ı      | 15    |

In April, USAID FED received the BSPs first deliverables and purchase orders were executed for the five listed Business Servicers Providers (BSPs):

- 1. Nimba Liberia Entrepreneur Asset Development (LEAD),
- 2. Montserrado/Margibi Top Consulting Inc. (TCi),
- 3. Lofa Jacob F. Tomei Enterprise Center (JFTEC),
- 4. Grand Bassa Community Youth Network Program (CYNP),
- 5. Bong Liberia Initiative Development Services (LIDS)

#### **Activity 2.4.2 Women Business Incubation**

#### Women-owned Business Incubation Program Task 2.4.2.2

A total of 82 women in five counties were interviewed in April for inclusion in the business incubation program. Candidates were drawn from a pool including those who participated in leadership training, and from VSLAs, and the value chains. Twenty nine women representing 28 organizations, groups, and individual businesses were selected for the program.

Workshops have been planned for May 5-7 in Bong, May 12-14 in Monrovia, and May 19-21 in Nimba. Participants will develop personalized business plans in the workshops.

Baseline data on five USAID FED indicators was gathered in April.

# Component Three: Build Local Technical and Managerial Human Resource Capacity

# Task 3.1.3.2 Organize workshops to include instructors and STTA for the completion of year two syllabi and lesson plans

Plans to organize workshops for the completion of the year two syllabi and lesson plans for the National Diploma in Agriculture (NDA) are currently underway. Dr. Carl Motsenbocker who previously facilitated curriculum development workshops is unable to return to Liberia as a result of the Ebola crisis. However, the new Component Three Lead, Dr. Sam Duo will commence his duties in May 2015. This activity will be of high priority for him.

## Task 3.2.1.1 Recruit an expert to work with the CoEs for the establishment of a Performance Management System (PMS)

In April 2015, an advertisement was placed in local newspapers for the recruitment of a Performance Management Specialist, however, USAID FED was unable to receive any applications for this position. As soon as the new Component 3 lead joins USAID FED, he will carry out this task. This activity is expected to commence by early June.

# Task 3.3.1.1 Recruit and mobilize construction firms to complete renovation and installation of all equipment and laboratory facilities for the Science Labs

In April, the multi-purpose science laboratory renovation works commenced at the four Centers of Excellence Institutions (CoE). Already, the firms have commenced the construction of the water towers and generator rooms. The Centers of Excellence institutions' Administrations are working closely with the construction firms and Global Construction Mechanical Company (GCMC) supervisors to ensure that work is progressing and in accordance with plan.



Figure 24: Construction of the multi-purpose science lab at NCCC

GCMC is contracted by USAID FED to provide supervision of the projects and submit regular reports on progress and achievements until completion of the Science Labs.

The three firms were issued "Notices to Proceed" upon submission of requirements under deliverable #I of the contract.

- Unique Business Corporation (UBC) BWI & NCCC
- VECO Construction Consultancy Incorporated GBCC
- Seek Engineering & Consultant (SEACON) Inc. LCCC

#### Activity 3.3.3 Establishment of computer labs at the CoEs

Task 3.3.3.1 Provide internet connectivity with additional computers and software at the CoEs to support the NDA and income generation for sustainability.

In accordance with the USAID FED FY15 work plan USAID FED intends to further assist the CoEs with the establishment of internet connectivity utilizing sustainability plans developed by the CoEs.

USAID FED is undergoing the procurement process for additional computers and IT software, as well as selecting a vendor to provide internet at the CoE's for a period of one year.

A RFP was issued and a vendor was selected in April to provide the internet services. Novafone was selected to provide internet services for the four CoEs for a total of USD\$84,360 for a period of one year.

The purpose of providing internet services is to help the CoEs establish commercialized enterprise systems whereby these CoEs would be able to maintain the facility by providing services to the community, students, and instructors as a means of enabling the institutions to properly manage and sustain their facilities independently. Internet access will be provided for the computer labs, libraries, Career, Resource & Internship Centers as well as departments of agriculture, business, administration, and other units of the institutions.

# Task 3.3.3.2 Computer labs provided with additional outfitting to adequately accommodate students and instructors during practical lessons

In March, the procurement process for the acquisition of computers, furniture and other ICT equipment for the computer laboratories at the four CoEs was initiated. In April, Crosswords Inc., the firm subcontracted under Lot #I for the provision of computers and other accessories began to deliver the equipment. The total contract value is USD \$139,010. Mattar Trading Company, was subcontracted for the delivery of Lot #2, including computer desks, chairs etc., for a total of USD \$12,175.

# Task 3.4.1.4 Support the establishment of two to three feasible enterprises with business and marketing plans

#### **Update on LCCC & NCCC Demonstration Farm**

During the reporting period, LCCC sold fifty-one bags of rice (50 kg) at a total of USD\$20 per bag to the MoA. The rice was harvested from the Community College demo farms. According to the Dean of Agriculture, Mr. Paul Nabieu, the money generated from the sale of this rice will be reinvested towards the redevelopment of the lowland rice enterprise.

LCCC have commenced the general brushing of the 3.7 ha of lowland rice on the demonstration farm, which includes, the peripheral bonds, inter bonds, and floodways.



Figure 25: Rice being loaded and sold at LCCC.

Students of the NCCC Agriculture Department under the close supervision of the department coordinator have commenced the spraying of the lowland rice demonstration site with herbicide chemical for students' practical exercises. The spraying activities of the lowland rice demonstration site is intended to reduce the number of unwanted plants (weeds) in the swamp area to give way for the reconstruction of the broken inter bonds, peripheral and floodway of the 2.5 ha of lowland rice fields for demonstration purposes. The 2.5 ha of lowland rice is intended for students to gain hands on training in lowland rice production.

Furthermore, NCCC has added an additional four goats to their goat shelter, now for a total of 14 goats. Initially, NCCC was required to provide ten goats under this activity MoU, but this has now increased it to 14 goats during April.

#### Other Activities at the CoE's

During the early part of April, the Grand Bassa Community College commenced relocation to its new campus facility in Paynesberry, Buchanan, Grand Bassa Figure 26: USAID FED Sr. VAEO Speaking To Students at County. Three departments, Agriculture, T-VET and the Health Science departments have moved over to the new



NCCC during an Agriculture Career Workshop

campus where classes have started. Students are initially faced with the high cost of transportation to the new facility to attend their classes. Another challenge faced by the institution is the need for office furniture and equipment to set up offices at the new facility. These items when provided will help speed up the relocation process in this same vein. USAID FED in accordance with its annual work plan has commenced the procurement of computers, office desks, chairs, projectors, internet facilities and other items for all of the four CoEs. These items will be used to set up the computer rooms, science labs, libraries and other relevant areas in support of the new NDA program currently being rolled out at the four institutions.

The office of the Academic Career Counseling at NCCC, organized a one day Agriculture career workshop on April 16th, 2015 on the main campus of the college. The Sr. Vocational Agriculture Education Officer was invited as guest lecturer, where he spoke to over 155 Agriculture students enrolled in both the NDA Program and the regular diploma program on the topic "The Importance of studying agriculture and opportunities within the field of agriculture." The Sr. VAEO urged students to look at the career as a money-making career, and not as subsistence farming.

### **Component Four: Cross-Cutting Activities**

### Task 4.1: Communications/Knowledge Management

#### **USAID FED Media Stories**

USAID FED was in ten media reports during April 2015.

- 1. Liberia's first Industrial Rice Processing Facility Launched (Daily Observer, News, Inquirer, Women Voices, ELBC and blog.usaid.gov)
- 2. USAID FED hands over technical equipment to boost Ministry of Agriculture Monitoring and Evaluation System (Microscope, Inquirer).
- 3. President Sirleaf Urges IFC to Empower Liberians (Daily Observer)
- 4. Rebuilding Liberia as Ebola Cases-Decline (blog.usaid.gov).

### **Task 4.2: Environmental Compliance**

A one day site monitoring visit was carried out by the Environmental Assistant along with the USAID FED Senior Engineer on the 17th of April 2015. The visit was primarily aimed at monitoring the de-roofing of asbestos materials from the building that is to serve the CoE's Science Laboratory at the Booker Washington Institute in Kakata, Margibi County.

USAID FED received reports from the local EPA Department in Margibi County, that due to staffing issues in the EPA, the designated authority to sign the permit requested by BWI had not been appointed at the Figure 27: Asbestos being removed at BWI for the newly renovated time of the request. However, the local EPA science labs. Department should ensure to carry out due monitoring



and supervision of the demolition and disposal process in line with EPA Guidelines. The activity was carried out by the subcontractor with direct supervision and monitoring by the local EPA office. USAID FED also monitored this activity to ensure compliance with our Field Operations Manual and USAID Environmental Regulations. This demolition and the disposal process of asbestos was successfully completed on the 17th of April.

### Task 4.3: Monitoring & Evaluation

#### Rapid Rural Assessment:

The draft of the Rapid Rural Appraisal Report is going through its final approval process before dissemination to USAID and MoA in mid-May 2015.

#### GIS Mapping:

- Conducted GPS usage training for nineteen G-CAP Executives and Staffs. They were trained on the following: taking waypoints of farm and community, and to determine the hectares of a farm; areas measurement.
- Designed map for the RRA (Rapid Rural Appraisal) Report.
- Built Women-Run Business Incubation Project Baseline Study tool on PDAs for data collection.
- Conducted PDAs usage training for one STTA, Donna Rosa, for the Women-Run Business Incubation Project Baseline data collection.

#### **Revisions of LOP targets:**

During the reporting period, 13 out of USAID FED's 26 indicators were updated to reflect current program implementation. The indicators were also aligned with the FTFMS table that was submitted to the USAID and the BFS.

### Task 4.4: Market Development Fund Management

#### Liberian Local Non-Governmental Organization (LNGO)

The following Liberian LNGOs were awarded fixed-price purchase awards during April of FY2015 under the Market Development Fund.

- Jacob F. Tomei Enterprise Center (JFT)
- Liberia Initiative for Development Services (LIDS)
- Top Consulting Inc.
- Community Youth Network Program (CYNP)
- Liberia Entrepreneurial & Asset Development (LEAD)
- Veco Construction Consultancy Inc.
- Seek Engineering and Construction (SEACON)
- Unique Business Corporation (UBC)